



# National Transportation Safety Board Aviation Accident Final Report

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<b>Location:</b>	Pearland, TX	<b>Accident Number:</b>	CEN14FA145
<b>Date &amp; Time:</b>	02/19/2014, 0845 CST	<b>Registration:</b>	N811BL
<b>Aircraft:</b>	BEECH B100	<b>Aircraft Damage:</b>	Destroyed
<b>Defining Event:</b>	Loss of control in flight	<b>Injuries:</b>	1 Fatal
<b>Flight Conducted Under:</b>	Part 91: General Aviation - Personal		

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## Analysis

The non-instrument-rated pilot departed on a cross-country flight in a twin-engine turboprop airplane on an instrument flight plan. As the pilot neared his destination airport, he received heading and altitude vectors from air traffic control. The controller cleared the flight for the approach to the airport; shortly afterward, the pilot radioed that he was executing a missed approach. The controller then issued missed approach instructions, which the pilot acknowledged. There was no further communication with the pilot. The airplane collided with terrain in a near-vertical angle. About the time of the accident, the automated weather reporting station recorded a 300-foot overcast ceiling, and 5 miles visibility in mist. Examination of the wreckage did not reveal any anomalies that would have precluded normal operation. Additionally, both engines displayed signatures consistent with the production of power at the time of impact. The pilot's logbook indicated that he had a total of 1,281.6 flight hours, with 512.4 in multi-engine airplanes and 192.9 in the accident airplane. The logbook also revealed that he had 29.7 total hours of actual instrument time, with 15.6 of those hours in the accident airplane. Of the total instrument time, he received 1 hour of instrument instruction by a flight instructor, recorded about 3 years before the accident. The accident is consistent with a loss of control in instrument conditions.

## Probable Cause and Findings

The National Transportation Safety Board determines the probable cause(s) of this accident to be: The noninstrument-rated pilot's loss of airplane control during a missed instrument approach. Contributing to the accident was the pilot's decision to file an instrument flight rules flight plan and to fly into known instrument meteorological conditions.

## Findings

<b>Aircraft</b>	Performance/control parameters - Not attained/maintained (Cause)
<b>Personnel issues</b>	Aircraft control - Pilot (Cause) Total instrument experience - Pilot (Cause) Qualification/certification - Pilot (Cause) Knowledge of meteorologic cond - Pilot (Factor) Decision making/judgment - Pilot (Factor) Total instruct/training recvd - Pilot
<b>Environmental issues</b>	Below VFR minima - Effect on personnel (Cause) Below VFR minima - Decision related to condition (Factor)

## Factual Information

### HISTORY OF FLIGHT

On February 19, 2014, about 0845 central standard time (CST), a Beech B100 King Air, airplane, N811BL, impacted terrain near Pearland, Texas. The private rated pilot, the sole occupant, was fatally injured, and the airplane was destroyed. The airplane was registered to and operated by TDC Aviation, LLC, Wilmington, Delaware. Instrument meteorological conditions prevailed and an instrument flight plan was filed for the 14 Code of Federal Regulations Part 91 cross-country flight. The flight originated from Austin, Texas.

There were several witnesses in the general area of the accident site; two witnesses reported hearing the airplane overhead, but could not see it because of the clouds. Three witnesses, who were working in an oil field, reported seeing the airplane impact the ground nose first.

### PILOT INFORMATION

The pilot held a private pilot certificate with ratings for airplane single and multi-engine land. The pilot held a third class medical certificate that was issued both as a student pilot and medical certificate on January 6, 2010, with the restriction; "must wear corrective lenses". At the time of the exam, the pilot reported 10 hours total flight time with 10 hours in last six months. The pilot's log book was located in the wreckage. A review of the log book revealed he had accumulated 1,281.6 total flight hours with 736.2 in single-engine airplanes, 512.4 in multi-engine airplanes, and 192.9 hours in the accident airplane. The review also revealed that he had a total of 29.7 total hours of actual instrument and 29.8 total hours of simulated instrument time. Of the total instrument time, 15.6 flight hours of actual instrument and 2.9 flight hours of simulated instrument time was in the accident airplane. A log entry on March 18, 2011, for 1.0 hour, was the only instrument instruction flight time logged with a flight instructor. The log book did not show a recommendation for the instrument check, nor an endorsement for the instrument rating. A review of Federal Aviation Administration (FAA) documents did not reveal a record of the pilot possessing an instrument rating.

### AIRCRAFT INFORMATION

The Beechcraft B100 King Air is a twin-turboprop airplane powered by two (Honeywell) Garrett AiResearch TPE-331 engines. A review FAA records revealed that the airplane was purchased by TDC aviation, LLC, on May 24, 2013. During the investigation, the maintenance records for the airplane were not available for review.

### METEOROLOGICAL INFORMATION

At 0853, the automated weather observation facility located at the Pearland Regional Airport (KLVJ), located about 1.5 miles east of the accident site recorded a wind from 180 degrees at 8 knots, 5 miles visibility, mist, an overcast sky at 300 feet, temperature 69 degrees Fahrenheit (F), dew point 61 F, and a barometric pressure of 30.01 inches of mercury.

### COMMUNICATIONS and RADAR INFORMATION

A review of air traffic control communications revealed that the pilot was handed off to several section controllers, during the flight and approach to the airport. The pilot was told to expect the RNAV 32 approach to the Pearland Regional airport (KLVJ). Routine vectors and altitude assignments were given to the pilot, with no problems noted. The last controller gave the pilot his final approach instructions, and cleared him for the RNAV 32 approach. The pilot read back the clearance correctly. The controller then terminated radar service and advised, pilot's discretion for the common traffic advisory frequency (CTAF). Shortly afterwards, the pilot radioed to approach control, that he was executing a missed approach. The controller issued a 170 degree radar vector and cleared the pilot to 2,000 feet. The pilot acknowledged the turn and altitude assignment. There were no further communications with the pilot and no reported distress calls from the pilot.

A review of the airplane's radar track revealed the approach to the airport. About midfield, the airplane appeared to start a slow climbing left turn. The turn radius appeared to increase, with the airplane in a descent. The last radar return had the airplane at 300 feet.

An air traffic control group was convened to review air traffic control services provided to the accident pilot, as well as, review associated information. The chairman's factual report is included in the public docket.

#### AIRPORT INFORMATION

The Pearland Regional Airport (KLVJ) airport is a public-use, non-towered airport, located south of Pearland, Texas and 9 miles south of the William P Hobby airport, (KHOU), Houston, Texas. Pilots are to use the CTAF for communications. KLVJ has a single 4,313 feet by 75 feet runway aligned 14/32. The RNAV (GPS) runway 32 weather minima for a LPV approach is a 300 foot ceiling and 7/8 mile visibility; the LNAV/circling approach minimums are a 500 foot ceiling and 1 mile visibility.

#### WRECKAGE AND IMPACT INFORMATION

The accident site was located about 1.5 miles west of KLVJ, in a rural field used for ranch land/oil field. The wreckage area consisted of an impact crater with signatures consistent with a near vertical collision with terrain. Both engines were found embedded in the ground about 6-8 feet deep, on the left and right side of the ground crater. Both engines had extensive impact damage; the respective propellers were located near their respective engines. The airplane's main landing gear actuator was retracted or gear up position, four flap actuators were located and measurements were consistent with 10-12 degrees of flaps extended. Due to the fragmentation of the wreckage, control continuity could not be established; however, the aileron and rudder cables breaks were either consistent with rescue cuts or overload failure. The airplane was extensively fragmented and a post-crash fire destroyed the majority of the airplane.

The airplane's cockpit voice recorder (CVR) was located and shipped to the vehicle recorder lab in Washington, DC for download. The recording was audited by the CVR group Laboratory and a summary report prepared. The CVR captured part of the previous flight; however, there were no recordings of the accident flight on the CVR.

## MEDICAL AND PATHOLOGICAL INFORMATION

The Galveston County Medical Examiner's Office, Texas City, Texas conducted an autopsy on the pilot. The cause of death was determined to be, "blunt force injuries".

The FAA Bioaeronautical Sciences Research Laboratory, Oklahoma City, Oklahoma, conducted toxicological testing on the pilot. The specimens were negative for tested drugs and alcohol.

## TEST AND RESEARCH

On scene examination of each engine was conducted; the engines were removed from the ground and both engines displayed heavy impact damage, consistent with a near vertical impact. Both engines had signs of second stage compressor and combustor housing buckling 360-degrees around the engines. Neither engine's combustor housing displayed signs of an uncontained failure. The left engine's first stage compressor shroud displayed signs of heavy rotational scoring, with compressor vanes broken and bent in the opposite direction of rotation. The left engine's compressor shroud showed evidence of metal spray on the aft side of the third stage turbine nozzle. The right engine's compressor shroud also displayed signs of rotational scoring. However, due to the amount of damage to the right engine determination could not be made on the presence of compressor shroud metal spray deposits. The damage and signatures on the engines were consistent with power and operation at the time of ground impact.

## History of Flight

Approach-VFR go-around	Loss of control in flight (Defining event)
Uncontrolled descent	Collision with terr/obj (non-CFIT)

## Pilot Information

Certificate:	Private	Age:	39
Airplane Rating(s):	Multi-engine Land; Single-engine Land	Seat Occupied:	Left
Other Aircraft Rating(s):	None	Restraint Used:	
Instrument Rating(s):	None	Second Pilot Present:	No
Instructor Rating(s):	None	Toxicology Performed:	Yes
Medical Certification:	Class 3 With Waivers/Limitations	Last FAA Medical Exam:	01/06/2010
Occupational Pilot:	No	Last Flight Review or Equivalent:	
Flight Time:	1281 hours (Total, all aircraft), 192.9 hours (Total, this make and model)		

## Aircraft and Owner/Operator Information

Aircraft Make:	BEECH	Registration:	N811BL
Model/Series:	B100	Aircraft Category:	Airplane
Year of Manufacture:		Amateur Built:	No
Airworthiness Certificate:	Normal	Serial Number:	BE-15
Landing Gear Type:	Retractable - Tricycle	Seats:	
Date/Type of Last Inspection:	Unknown	Certified Max Gross Wt.:	
Time Since Last Inspection:		Engines:	2 Turbo Prop
Airframe Total Time:		Engine Manufacturer:	Garrett
ELT:	Installed	Engine Model/Series:	TPE-331
Registered Owner:	TDC AVIATION LLC	Rated Power:	715 hp
Operator:	TDC AVIATION LLC	Operating Certificate(s) Held:	None

## Meteorological Information and Flight Plan

Conditions at Accident Site:	Instrument Conditions	Condition of Light:	Day
Observation Facility, Elevation:	KLVJ	Distance from Accident Site:	2 Nautical Miles
Observation Time:	0853 CST	Direction from Accident Site:	70°
Lowest Cloud Condition:		Visibility	5 Miles
Lowest Ceiling:	Overcast / 300 ft agl	Visibility (RVR):	
Wind Speed/Gusts:	8 knots /	Turbulence Type Forecast/Actual:	/
Wind Direction:	170°	Turbulence Severity Forecast/Actual:	/
Altimeter Setting:	30.01 inches Hg	Temperature/Dew Point:	21 °C / 18 °C
Precipitation and Obscuration:	Mist		
Departure Point:	Austin, TX (KAUS)	Type of Flight Plan Filed:	IFR
Destination:	Pearland, TX (KLVJ)	Type of Clearance:	IFR
Departure Time:		Type of Airspace:	

## Airport Information

Airport:	Pearland Regional (KLVJ)	Runway Surface Type:	N/A
Airport Elevation:	44 ft	Runway Surface Condition:	
Runway Used:	32	IFR Approach:	RNAV
Runway Length/Width:	4313 ft / 75 ft	VFR Approach/Landing:	None

## Wreckage and Impact Information

<b>Crew Injuries:</b>	1 Fatal	<b>Aircraft Damage:</b>	Destroyed
<b>Passenger Injuries:</b>	N/A	<b>Aircraft Fire:</b>	On-Ground
<b>Ground Injuries:</b>	N/A	<b>Aircraft Explosion:</b>	None
<b>Total Injuries:</b>	1 Fatal	<b>Latitude, Longitude:</b>	29.517500, -95.260278

## Administrative Information

<b>Investigator In Charge (IIC):</b>	Craig Hatch	<b>Report Date:</b>	06/18/2015
<b>Additional Participating Persons:</b>	David Burk; FAA FSDO; Houston, TX Kris Wetherell; Beechcraft Corporation; Wichita, KS Jay Eller; Honeywell; Phoenix, AZ		
<b>Publish Date:</b>	06/18/2015		
<b>Investigation Docket:</b>	<a href="http://dms.nts.gov/pubdms/search/dockList.cfm?mKey=88811">http://dms.nts.gov/pubdms/search/dockList.cfm?mKey=88811</a>		

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The Independent Safety Board Act, as codified at 49 U.S.C. Section 1154(b), precludes the admission into evidence or use of any part of an NTSB report related to an incident or accident in a civil action for damages resulting from a matter mentioned in the report. A factual report that may be admissible under 49 U.S.C. § 1154(b) is available [here](#).