National Transportation Safety Board
Aviation Accident Final Report

Location:	Wichita, KS	**Accident Number:**	CEN15FA034
Date & Time:	10/30/2014, 0948 CDT	**Registration:**	N52SZ
Aircraft:	RAYTHEON AIRCRAFT COMPANY B200	**Aircraft Damage:**	Destroyed
Defining Event:	Loss of engine power (partial)	**Injuries:**	4 Fatal, 2 Serious, 4 Minor
Flight Conducted Under:	Part 91: General Aviation - Ferry		

Analysis

The airline transport pilot was departing for a repositioning flight. During the initial climb, the pilot declared an emergency and stated that the airplane "lost the left engine." The airplane climbed to about 120 ft above ground level, and witnesses reported seeing it in a left turn with the landing gear extended. The airplane continued turning left and descended into a building on the airfield. A postimpact fired ensued and consumed a majority of the airplane.

Postaccident examinations of the airplane, engines, and propellers did not reveal any anomalies that would have precluded normal operation. Neither propeller was feathered before impact. Both engines exhibited multiple internal damage signatures consistent with engine operation at impact. Engine performance calculations using the preimpact propeller blade angles (derived from witness marks on the preload plates) and sound spectrum analysis revealed that the left engine was likely producing low to moderate power and that the right engine was likely producing moderate to high power when the airplane struck the building. A sudden, uncommanded engine power loss without flameout can result from a fuel control unit failure or a loose compressor discharge pressure (P3) line; thermal damage prevented a full assessment of the fuel control units and P3 lines. Although the left engine was producing some power at the time of the accident, the investigation could not rule out the possibility that a sudden left engine power loss, consistent with the pilot's report, occurred.

A sideslip thrust and rudder study determined that, during the last second of the flight, the airplane had a nose-left sideslip angle of 29°. It is likely that the pilot applied substantial left rudder input at the end of the flight. Because the airplane's rudder boost system was destroyed, the investigation could not determine if the system was on or working properly during the accident flight. Based on the available evidence, it is likely that the pilot failed to maintain lateral control of the airplane after he reported a problem with the left engine. The evidence also indicates that the pilot did not follow the emergency procedures for an engine failure during takeoff, which included retracting the landing gear and feathering the propeller.

Although the pilot had a history of anxiety and depression, which he was treating with medication that he had not reported to the Federal Aviation Administration, analysis of the pilot's autopsy and medical records found no evidence suggesting that either his medical conditions or the drugs he was taking to treat them contributed to his inability to safely control the airplane in an emergency situation.

Probable Cause and Findings

The National Transportation Safety Board determines the probable cause(s) of this accident to be:
The pilot's failure to maintain lateral control of the airplane after a reduction in left engine power and his application of inappropriate rudder input. Contributing to the accident was the pilot's failure to follow the emergency procedures for an engine failure during takeoff. Also contributing to the accident was the left engine power reduction for reasons that could not be determined because a postaccident examination did not reveal any anomalies that would have precluded normal operation and thermal damage precluded a complete examination.

Findings

Aircraft	Lateral/bank control - Not attained/maintained (Cause) Engine out control - Not attained/maintained (Cause) Engine (turbine/turboprop) - Not specified (Factor)
Personnel issues	Aircraft control - Pilot (Cause) Incorrect action selection - Pilot (Cause) Lack of action - Pilot (Factor) Identification/recognition - Pilot Decision making/judgment - Pilot

Factual Information

HISTORY OF FLIGHT

On October 30, 2014, at 0948 central daylight time, a Raytheon Aircraft Company King Air B200 airplane, N52SZ, impacted the FlightSafety International (FSI) building located on the airport infield during initial climb from Wichita Mid-Continent Airport (ICT), Wichita, Kansas. The airline transport pilot, who was the sole occupant, was fatally injured, and the airplane was destroyed. Three building occupants were fatally injured, two occupants sustained serious injuries, and four occupants sustained minor injuries. The airplane was registered to and operated by Gilleland Aviation, Inc., Georgetown, Texas, under the provisions of 14 Code of Federal Regulations Part 91 as a ferry flight. Visual meteorological conditions prevailed, and an instrument flight rules (IFR) flight plan was filed. The flight was originating from ICT at the time of the accident and was en route to Mena Intermountain Municipal Airport (MEZ), Mena, Arkansas.

The ICT air traffic controllers stated that the accident flight was cleared for takeoff on runway 1R and instructed to fly the runway heading. After becoming airborne, the pilot declared an emergency and stated that the airplane "lost the left engine." The airplane then entered a shallow left turn, continued turning left, and then descended into a building. A controller called aircraft rescue and firefighting on the "crash phone" just before impact. The controllers observed flames and then black smoke coming from the accident site.

Witnesses in the Cessna Service Center building on the east side of runway 1R also observed the airplane departing runway 1R. They indicated that the airplane then porpoised several times before making a left turn. The airplane continued the left turn, barely cleared the top of a hangar on the west side of runway 1R, and then descended into a building. The witnesses reported that the landing gear was extended and that they could not clearly hear the sound of the engines. The airplane's altitude appeared to be less than 150 ft above ground level (agl).

Airport surveillance video cameras captured the last 9 seconds of the flight. The videos showed that the airplane was turning left and in a nose-left sideslip as it overflew a hangar. The cameras showed that the airplane was about 120 ft agl when it impacted the FSI building, and a postimpact explosion and fire ensued.

PERSONNEL INFORMATION

The pilot, age 53, held an airline transport pilot (ATP) certificate with ratings for airplane single-engine and multiengine land. On August 4, 2014, he was issued a Federal Aviation Administration (FAA) second-class medical certificate with the limitation that he must wear corrective lenses.

The pilot's flight time logbook was not located during the investigation. At the time of his August 2014 medical examination, he reported a total flight time of 3,067 hours with 200 hours in the preceding 6 months. A review of the pilot's flight training records from FSI, dated September 18, 2014, revealed that he had accumulated 3,139 total flight hours, 2,843 hours of which were in multiengine airplanes. The King Air B200 did not require a type rating.

From September 4 to 19, 2014, the pilot received Beechcraft King Air 300 series initial training at FSI, Wichita, Kansas. The training was specifically for the King Air 350 Proline 21 model and included 58.5 ground training hours, 12 briefing hours, 14 pilot-flying simulator hours, and 12 pilot-not-flying hours. During the course, the pilot reviewed and completed the required emergency procedures. The pilot satisfactorily completed the course with an examination that included 2.5 hours written/oral examination time and 2.2 simulator flying hours.

On September 19, 2014, the pilot was issued an FAA ATP temporary airman certificate with the following ratings and limitations: airplane multiengine land ratings for Beechcraft (BE)-300, BE-400, Cessna (CE)-525, Dassault Falcon (DA)-10, Learjet (LR)-45, LR-60, LR-JET, Mitsubishi (MU)-300 airplanes; second-in-command privileges only for BE-400, CE-525, DA-10, LR-45, LR-60, LR-JET, and MU-300 airplanes; and private pilot privileges for airplane single-engine land.

AIRCRAFT INFORMATION

The accident airplane was bought by Gilleland Aviation, Inc., Georgetown, Texas, on October 28, 2014. The King Air B200 was a six-seat, low-wing, multiengine airplane manufactured in 2000. The airplane was powered by two Pratt & Whitney PT6A-42 turboprop engines that each drove a Hartzell four-bladed, hydraulically operated, constant-speed propeller with full feathering and reversing capabilities. The propeller blade angle settings for this installation were -11.0° ± 0.5° reverse, 18.2° ± 0.1° low, and 85.8° ± 0.5° feather.

On October 30, 2014, at 0740, the airplane was refueled at ICT by Signature Flight Support. The two outboard fuel tanks (usable 193-gallon capacity each) were reported to have been filled to capacity. The two auxiliary fuel tanks (usable 79-gallon capacity each) were reported to be empty. The fueling receipt noted that 57 gallons of Jet A fuel were added to the left main tank and that 53 gallons of Jet A fuel were added to the right main tank.

Maintenance

A review of the airplane maintenance records found that major scheduled maintenance was completed at Hawker Beechcraft Services, Wichita, Kansas, on October 22, 2014. The maintenance included left and right engine hot-section inspections and an overhaul of the right propeller. At the time of the accident, the airplane had accumulated 1.4 hours and 2 cycles since it was released to service on October 22, 2014. The review found no maintenance record discrepancies that would have affected the operation or performance of the airplane.

Postmaintenance Test Flights

During the October 22, 2014, Hawker Beechcraft postmaintenance test flight, the following discrepancies were noted:

- The left throttle lever was ahead of the right by about 1/4 of the lever knob.
- The cabin environmental system pressurization leak rate was high.

All other systems functioned normally. The engine interturbine temperature (ITT) gauge indications were split, indicating that one of the engines was operating more efficiently than the other; however, both engines were able to achieve maximum power per the pilot's operating handbook (POH) performance charts with no temperature ITT exceedance.

Maintenance was performed to address the throttle matching and cabin environmental system discrepancies, and a second maintenance test flight was conducted on October 27, 2014. During the flight, it was noted that the throttle lever mismatch was corrected. The environmental system bleed air valves (flow packs) pressurization leak rates were acceptable, although one was weaker than the other when tested independently. No other anomalies were noted.

Following the flight, maintenance personnel confirmed that the left flow pack output was higher than the right. Both sides of the system passed maintenance manual and ground operational checks. To better understand these findings, the airplane owner agreed that the left and right environmental system flow packs, electronic controllers, and thermistors should be swapped.

Rudder Boost System

The airplane was equipped with a rudder boost system to aid the pilot in maintaining directional control in the event of an engine failure or a large variation of power between the engines. The rudder cable system incorporated two pneumatic rudder-boosting servos that would actuate the cables to provide rudder pressure to help compensate for asymmetrical thrust. During operation, a differential pressure valve would accept bleed air pressure from each engine. When the pressure varied between the bleed air systems, the shuttle in the differential pressure valve would move toward the low pressure side. As the pressure differential reached a preset tolerance, a switch on the low pressure side would close, activating the rudder boost system. The system was designed only to help compensate for asymmetrical thrust; the pilot was to accomplish appropriate trimming.

The system was controlled by a toggle switch, placarded "RUDDER BOOST – OFF" and located on the pedestal below the rudder trim wheel. The switch was to be turned on before flight. A preflight check of the system could be performed during the run-up by retarding the power on one engine to idle and advancing power on the opposite engine until the power difference between the engines was great enough to close the switch that activates the rudder boost system. Movement of the appropriate rudder pedal (left engine idling, right rudder pedal would move forward) would be noted when the switch closed, indicating that the system was functioning properly for low engine power on that side. The check was to be repeated with opposite power settings to check for movement of the opposite rudder pedal. Moving either or both of the bleed air valve switches in the copilot's subpanel to the "INSTR & ENVIR OFF" position would disengage the rudder boost system.

Autofeathering System

The airplane was equipped with an autofeathering system that provided a means of automatically feathering the propeller in the event of an engine failure. The system was armed using a switch on the pilot's subpanel placarded "AUTOFEATHER – ARM – OFF – TEST." With the switch in the "ARM" position and both power levers above about 90 percent N1, the green L and R AUTOFEATHER annunciators located on the caution/advisory panel would illuminate, indicating that the system was armed. If either power lever was not above about 90 percent N1, the system would be disarmed, and neither annunciator would be illuminated. When the system was armed and the torque on a failing engine dropped below about 410 ft-lbs, the operative engine's autofeather system would be disarmed. When the torque on the failing engine dropped below about 260 ft-lbs, the oil was dumped from the servo, and the feathering spring and counterweights feathered the propeller.

For King Air B200 airplanes equipped with Hartzell propellers, the propeller autofeather system must be operable for all flights and be armed for takeoff, climb, approach, and landing. A preflight system test, as described in the King Air POH, Section IV, "NORMAL PROCEDURES," was required. Since an engine would not actually be shut down during a test, the AUTOFEATHER annunciator for the engine being tested would cycle on and off as the torque oscillated above and below the 260 ft-lbs setting.

Emergency Procedure

The King Air B200 POH outlined an Engine Failure During Takeoff (at or above V1) Takeoff Continued procedure, which stated, in part, the following:

1. Power –> maximum allowable
2. Airspeed –> maintain (takeoff speed or above)
3. Landing gear –> up

Note: If the autofeather system...is being used, do not retard the failed engine power lever until the autofeather system has completely stopped the propeller rotation. To do so will deactivate the autofeather circuit and prevent automatic feathering.

4. Propeller lever (inoperative engine) –> feather (or verify that propeller is feathered if autofeather is installed)

METEOROLOGICAL INFORMATION

At 0953, the automated weather observation at ICT reported wind from 350 degrees and 16 knots, visibility of 10 miles, a few clouds at 15,000 ft, temperature 59° F, dew point 37° F, and altimeter setting 30.12 inches of Mercury.

COMMUNICATIONS

The following is a chronological summary of the communications between the accident pilot and the ICT air traffic controllers.

0938 The pilot requested an IFR clearance to MEZ. Clearance Delivery read the clearance to the pilot, and the pilot read back the clearance correctly.

0940 The pilot requested taxi clearance with the automatic terminal information service (ATIS). Ground Control issued a taxi clearance to runway 1R at Echo 3 intersection via taxiways Alpha 5, Alpha, Bravo, Echo. The pilot read back the instructions correctly.

0941 Ground Control reverified that the accident pilot had ATIS Hotel.

0942 The pilot advised he had to perform a quick run-up and asked Ground Control for a location to complete the run-up. Ground Control advised him to proceed to the end of the taxiway or to the Echo 3 intersection.

0947 The pilot requested and was cleared for takeoff by Local Control on runway heading. The pilot read back the instructions correctly.

0948 The pilot declared an emergency and advised that he "lost the left engine."

FLIGHT RECORDERS

Cockpit Voice Recorder

The airplane was equipped with a Fairchild Model A100S cockpit voice recorder (CVR). The unit was removed from the wreckage and sent to the National Transportation Safety Board (NTSB) Vehicle Recorder Laboratory for download. A timeline generated from the CVR recording determined that the time duration from liftoff to building impact was about 26 seconds.

Nonvolatile Memory

The airplane was equipped with a Sandel ST3400 terrain awareness and warning system and radio magnetic indicator unit. This unit was retained and examined by the NTSB Vehicle Recorder Laboratory. The examination revealed that the unit sustained severe thermal damage and that the nonvolatile memory contents were destroyed; therefore, no data were available for recovery.

WRECKAGE AND IMPACT INFORMATION

General

The accident site was located at latitude 37° 39.592 N, longitude 97° 25.490 W, at an elevation of 1,363 ft mean sea level. The airplane struck the northeast corner of the FSI building, which housed several flight simulators. A large simulator room on the north end was the point of impact and sustained most of the structural and fire damage. The simulator room was about two stories high, about 198 ft long (east-west), and about 42 ft deep (north-south). Most of the airplane wreckage was distributed from the northeast corner toward the southwest corner of the room and remained on the roof of the simulator room and the attached buildings.

A postimpact fired ensued and consumed a majority of the airplane. The left engine, propeller, and left main landing gear were found just inside the building on the ground level. A majority of the left outboard wing, flap, and aileron were found at the foot of the building's exterior east wall. The fuselage, tail section, cockpit, right engine, and right main landing gear were located on the conjoined buildings' rooftops. The cockpit, instrument panels, right engine, and right landing gear strut were located about 160 ft from the initial impact point to the south on the roof of the simulator room. The right engine and propeller came to rest next to the cockpit.

The cabin area of the fuselage and empennage came to rest inverted on the lower, west roof. The cabin area was mostly consumed by the postimpact fire. Portions of the wing center section and all of the tail section were located to the south on the lower roof of the conjoined building. The right wing had separated and came to rest on the roof of another attached building about 120 ft from the initial impact point. A separated portion of a propeller blade was found near the right wing. A separated propeller blade tip was found in a parking lot about 200 ft northeast from the initial impact point. The tail section sustained severe thermal damage, but remained recognizable. The horizontal stabilizers remained attached to the vertical stabilizer with the elevators attached. The elevator trim tabs remained attached to their respective elevator. The vertical stabilizer remained attached to the aft fuselage with the rudder attached. The rudder trim tab remained attached to the rudder.

The left main landing gear was found extended with the down-lock latched into place. The structure of the right main landing gear was not intact. The strut, wheel, and tire of the nose gear assembly were found in the parking lot on the north side of the building. Witness and video evidence, which is discussed in the "ADDITIONAL INFORMATION" section of this report, confirmed that the landing gear were extended before impact.

One of the four rudder cables in the tail section had the ball swage fitting still attached. The other three cables (one rudder and two elevators) were separated with rusty coloration at the separation point. The three cables were stiff 3 to 9 inches from the fracture surface, consistent with high-temperature oxidation and separation. The rest of the three cables remained flexible, which was typical of a control cable.

Rudder flight control continuity was established from the rudder to the flight control cables. One cable terminated at the aft fuselage in a thermal separation, and the other cable terminated at a more forward position at a cable end.

Down elevator control continuity was confirmed from the elevator surface to the aft fuselage. The up elevator aft bell crank segment was separated with the flight control cable attached. Both cables terminated at the aft fuselage in thermal separations.

A secondary examination of the flight control systems was conducted at a secure storage facility. The primary and secondary flight control cables were all accounted for from the cockpit to each respective flight control surface with cable separations that exhibited signatures consistent with thermal separation, tensile overload, and/or being cut during recovery.

Flap Actuators

The only flap actuator observed was the outboard left flap actuator, and the position equated to about 10° extended. A secondary examination of the flap switch handle determined that it was in the UP detent.

The flaps had three positions: UP, APPROACH, and DOWN. UP was 0°, APPROACH was 14° (+ or - 1°), and DOWN was 35° (+1°/-2°). According to the POH, the flaps could be set to UP or APPROACH during takeoff. Any of the three flap positions could be selected by moving the flap switch handle up or down to the selected position indicated on the pedestal. The flaps could not be stopped in between any of the three positions.

Trim Actuators

The rudder trim actuator position equated to greater than 15° tab trailing edge left (rudder right, nose right). The left and right elevator trim actuator positions equated to 0° trim. The right aileron trim actuator position equated to about 9° tab trailing edge up (right wing up).

Rudder Boost and Autofeathering Systems

The rudder boost system, autofeathering system, and their respective cockpit controls were mostly consumed by the postimpact fire. Due to the extensive thermal damage, an examination of the systems could not be accomplished.

Powerplants

The engines and propellers were relocated to a secure hangar where airframe components were removed, and the propellers were separated from the engines.

Engine teardown examinations were performed from November 3 to 5, 2014, at a Pratt & Whitney service center. Although the engine inlet housings, gearbox cases, and the accessory housings and tubing were severely fire-damaged, the core engines were intact and could be fully evaluated. No evidence of preimpact failure was found. Both engine compressors exhibited impact damage characteristic of foreign object damage. Both engines' gas producer and power turbine rotor gas path components displayed circumferential friction, rub, and scoring damage characteristic of damage that occurs when normal operating clearances between rotating and stationary components are momentarily lost as the engine experiences abnormal axial and radial loading during an impact sequence. The left engine power turbine shaft was separated torsionally, consistent with the sudden stoppage of the propeller (blade strike) while the power turbine shaft continued to rotate.

The left engine fuel pump and fuel control housings were thermally destroyed; examination of the remaining (steel) engine fuel system and propeller governor system components and tubing connections recovered from the debris revealed no anomalies. The extensive thermal damage prevented full assessment of the fuel metering system, including the fuel control units and compressor discharge pressure lines (P3) to both engines. The left engine propeller governor and propeller overspeed governor were examined and tested at Woodward, Inc., Rockford, Illinois, with no preimpact anomalies noted.

The propellers were examined in Wichita from November 1 to 3, 2014, and again at Hartzell Propellers, Inc., Piqua, Ohio, on September 9 and 10, 2015. Fracture features and dimensions of the recovered propeller blade segments identified them as the missing outboard sections of two consecutive left propeller blades. Both blades were separated chordwise and exhibited leading edge tearing signatures. The left propeller blade damage also included other leading edge dents and tearing, aft bending, and moderate twisting. All of the propeller damage was consistent with impact loading or postimpact fire. The right propeller blades were thermally consumed.

All eight of the propeller preload plates displayed witness marks consistent with abnormal loading (blade strike). Although witness marks can reflect impact blade angles from later stages of the impact sequence, carefully analyzed preload plate witness marks can be a relatively reliable indication of the preimpact blade angle for this propeller design. The angular positions of the witness marks were used to approximate blade position at the time each impact occurred. The preload plate witness marks of the respective propellers indicated that the left propeller was likely at a 17° blade angle upon initial impact, and the right propeller was likely at a 22.5° blade angle upon initial impact.

Engine performance calculations using the derived blade angles and sound spectrum analysis-based findings (see the "CVR Sound Spectrum Analysis" section of this report) indicated that the left engine was likely operating but producing low to moderate power when the airplane struck the building and that the right engine was operating normally and producing moderate to high power when the airplane struck the building.

MEDICAL AND PATHOLOGICAL INFORMATION

This 53-year-old pilot had been an air traffic controller for more than 20 years at ICT and retired in 2013. Since his first medical certification in 1980, the pilot had reported thyroid disease, hernias, and recurrent symptomatic kidney stones to the FAA. Beginning in 1997, he had episodes of anxiety and depression, which required intermittent treatment with medication. During the first episode, he was unable to work for a certain time. A second episode began in October 2013 and continued through the accident date. He did not report his recurrent anxiety or his use of buspirone and escitalopram to the FAA. However, he visited his primary care physician about 1 month before the accident and was noted to be stable on the medications. In addition, the pilot had a procedure to treat kidney stones in 2013 that he did not report to the FAA.

On November 3, 2014, the Regional Forensic Science Center, Sedgwick County, Kansas, performed an autopsy on the pilot. The cause of death was determined to be thermal injuries and smoke inhalation and the manner of death was determined to be an accident. According to the autopsy report, a thin plastic medical catheter was identified in the pilot's pelvis, but it was not further described in the report. The Regional Forensic Science Center also conducted toxicology testing of the pilot's heart blood, which identified carboxyhemoglobin at 39 percent, but no other tested for substances were found.

Toxicology testing performed by the Bioaeronautical Research Laboratory at the FAA's Civil Aerospace Medical Institute identified buspirone and citalopram and its metabolite n-desmethylcitalopram in the pilot's heart blood and urine. In addition, the carboxyhemoglobin was 35 percent; no ethanol, cyanide, or any other tested for substances were identified. Buspirone, also named BuSpar, is an anxiolytic prescription medication. Buspirone is different from other anxiolytics in that it has little, if any, typical anti-anxiety side effects, such as sedation and physical impairment, but it does carry a warning, "May impair mental and/or physical ability required for the performance of potentially hazardous tasks (e.g., driving, operating heavy machinery)." Citalopram is a prescription antidepressant, also named Celexa, which carries a warning, "May impair mental and/or physical ability required for the performance of potentially hazardous tasks (e.g., driving, operating heavy machinery)."

ADDITIONAL INFORMATION

Airport Surveillance Video Data

Airport surveillance videos, which captured the last 9 seconds of the flight, including an image of the airplane within 1 second of impact, was used to estimate the airplane's trajectory and speed. The estimations indicated that the airplane's groundspeed increased from 85 to 92 knots and that the descent rate increased from about 0 to 1,600 ft per minute just before impact. The airplane's altitude reached a maximum of about 120 ft agl before it descended into the building.

Sideslip Thrust and Rudder Study

The NTSB conducted a sideslip thrust and rudder study based on information from the surveillance videos. This study evaluated the relationships between the airplane's sideslip angle, thrust differential, and rudder deflection. Calculations made using multiple rudder deflection angles showed that full right rudder deflection would have resulted in a sideslip angle near 0°, a neutral rudder would have resulted in an airplane sideslip angle between 14° and 19°, and a full left rudder deflection would have resulted in an airplane sideslip angle between 28° and 35° airplane nose left. Calculation of the airplane's sideslip angle as captured in the image of the airplane during the last second of flight showed that the airplane had a 29° nose-left sideslip, which would have required the application of a substantial left rudder input.

CVR Sound Spectrum Analysis

A sound spectrum analysis was completed using harmonic signatures recorded on the CVR from the cockpit area microphone and an unconnected microphone jack. A graph of the harmonic signatures from the cockpit area microphone show signatures that likely represent the propeller blade tip sounds and propeller rpm diverging, consistent with one propeller rpm decreasing.

A graph of harmonic signatures from the unconnected microphone jack revealed electrical noise signatures generated from the engines. At the beginning of the graph, these signatures (two for each engine) increased, corresponding to increasing engine rpm. Later, two of the signatures began to decrease, consistent with one engine's rpm decreasing.

History of Flight

Initial climb	Loss of engine power (partial) (Defining event)
Emergency descent	Collision with terr/obj (non-CFIT) Loss of control in flight

Pilot Information

Certificate:	Airline Transport	**Age:**	53, Male
Airplane Rating(s):	Multi-engine Land; Single-engine Land	**Seat Occupied:**	Left
Other Aircraft Rating(s):	None	**Restraint Used:**	
Instrument Rating(s):	Airplane	**Second Pilot Present:**	No
Instructor Rating(s):	None	**Toxicology Performed:**	Yes
Medical Certification:	Class 2 With Waivers/Limitations	**Last Medical Exam:**	08/04/2014
Occupational Pilot:	Yes	**Last Flight Review or Equivalent:**	09/19/2014
Flight Time:	3139 hours (Total, all aircraft)		

Aircraft and Owner/Operator Information

Aircraft Manufacturer:	RAYTHEON AIRCRAFT COMPANY	**Registration:**	N52SZ
Model/Series:	B200	**Aircraft Category:**	Airplane
Year of Manufacture:		**Amateur Built:**	No
Airworthiness Certificate:	Normal	**Serial Number:**	BB-1686
Landing Gear Type:	Tricycle	**Seats:**	
Date/Type of Last Inspection:	10/22/2014, Continuous Airworthiness	**Certified Max Gross Wt.:**	12500 lbs
Time Since Last Inspection:	1.4 Hours	**Engines:**	Turbo Prop
Airframe Total Time:		**Engine Manufacturer:**	Pratt & Whitney
ELT:	Installed, not activated	**Engine Model/Series:**	PT6A-42
Registered Owner:	Gilleland Aviation Inc	**Rated Power:**	850 hp
Operator:	Gilleland Aviation Inc	**Air Carrier Operating Certificate:**	None

Meteorological Information and Flight Plan

Conditions at Accident Site:	Visual Conditions	**Condition of Light:**	Day
Observation Facility, Elevation:	KICT, 1340 ft msl	**Observation Time:**	0953 CDT
Distance from Accident Site:	0 Nautical Miles	**Direction from Accident Site:**	183°
Lowest Cloud Condition:	Few / 15000 ft agl	**Temperature/Dew Point:**	15°C / 3°C
Lowest Ceiling:		**Visibility**	10 Miles
Wind Speed/Gusts, Direction:	16 knots, 350°	**Visibility (RVR):**	
Altimeter Setting:	30.12 inches Hg	**Visibility (RVV):**	
Precipitation and Obscuration:	No Obscuration; No Precipitation		
Departure Point:	Wichita, KS (ICT)	**Type of Flight Plan Filed:**	IFR
Destination:	MENA, AR (MEZ)	**Type of Clearance:**	IFR
Departure Time:	0947 CDT	**Type of Airspace:**	Air Traffic Control; Class C

Airport Information

Airport:	WICHITA MID-CONTINENT (ICT)	**Runway Surface Type:**	Concrete
Airport Elevation:	1333 ft	**Runway Surface Condition:**	Dry
Runway Used:	01R	**IFR Approach:**	None
Runway Length/Width:	7301 ft / 150 ft	**VFR Approach/Landing:**	Forced Landing

Wreckage and Impact Information

Crew Injuries:	1 Fatal	**Aircraft Damage:**	Destroyed
Passenger Injuries:	N/A	**Aircraft Fire:**	On-Ground
Ground Injuries:	3 Fatal, 2 Serious, 4 Minor	**Aircraft Explosion:**	On-Ground
Total Injuries:	4 Fatal, 2 Serious, 4 Minor	**Latitude, Longitude:**	37.652500, -97.429722 (est)

Administrative Information

Investigator In Charge (IIC):	Joshua D Lindberg	**Adopted Date:**	03/01/2016
Additional Participating Persons:	Matthew Rigsby; FAA; Dallas, TX Ernest Hall; Textron Aviation; Wichita, KS Dan Boggs; Hartzell Propeller Mike Gibbons; Textron Aviation; Wichita, KS Les Doud; Hartzell Propeller; Piqua, OH		
Publish Date:	02/29/2016		
Note:	The NTSB traveled to the scene of this accident.		
Investigation Docket:	http://dms.ntsb.gov/pubdms/search/dockList.cfm?mKey=90333		

The National Transportation Safety Board (NTSB), established in 1967, is an independent federal agency mandated by Congress through the Independent Safety Board Act of 1974 to investigate transportation accidents, determine the probable causes of the accidents, issue safety recommendations, study transportation safety issues, and evaluate the safety effectiveness of government agencies involved in transportation. The NTSB makes public its actions and decisions through accident reports, safety studies, special investigation reports, safety recommendations, and statistical reviews.

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.