



AVIATION



HIGHWAY



MARINE



RAILROAD



PIPELINE

# Aviation Investigation Final Report

<b>Location:</b>	Bentonville, Arkansas	<b>Accident Number:</b>	CEN24LA115
<b>Date &amp; Time:</b>	February 14, 2024, 14:10 Local	<b>Registration:</b>	N95GK
<b>Aircraft:</b>	Beech 400	<b>Aircraft Damage:</b>	Substantial
<b>Defining Event:</b>	Flight control sys malf/fail	<b>Injuries:</b>	2 Minor, 7 None
<b>Flight Conducted Under:</b>	Part 91: General aviation - Business		

## Analysis

During the takeoff the pilot pulled the airplane's control yoke aft to rotate and the airplane lifted off the runway as normal. The nose of the airplane dropped, and the pilot applied additional backpressure on the yoke. The pilot reported he felt a "snap" followed by a lack of tension on the control yoke. The airplane pitched down and settled back on the runway. The pilot applied maximum braking and full thrust reverse; however, the airplane continued off the end of the runway. The pilot applied left rudder and brake to turn the airplane to avoid contacting a gas station. The landing gear collapsed during the turn, which resulted in substantial damage to the right wing when it struck the ground.

A postaccident examination of the airplane revealed the elevator control cable was fractured at a pulley bracket near the aft portion of the fuselage where the cable transitioned from a horizontal to a vertical orientation. A metallurgical examination found nearly all the wires of the cable had rubbing damage to varying extents around the sides of the wires near the fracture. The upper guard pin exhibited wear, scratch marks, and gouges. The pulley contained several isolated wire fragments. The damage on the cable, upper guard pin on the pulley, and the pulley assembly was consistent with the cable having been improperly routed on the wrong side of the upper guard pin. Over time, the cable likely rubbed against the upper guard pin until the cable was sufficiently damaged to produce failure under normal operating loads.

A review of the maintenance logbook entries found that the elevator cable was replaced about a year before the accident and that the airplane flew about 316.5 hours before the cable separated.

## Probable Cause and Findings

The National Transportation Safety Board determines the probable cause(s) of this accident to be:

Improper rigging of the elevator cable over the upper guard pin, which resulted in a cable separation and loss of elevator control.

### Findings

Personnel issues	Replacement - Maintenance personnel
Aircraft	Elevator control system - Incorrect service/maintenance
Aircraft	Elevator control system - Damaged/degraded
Aircraft	Elevator control system - Failure

# Factual Information

## History of Flight

Prior to flight	Aircraft maintenance event
Takeoff	Flight control sys malf/fail (Defining event)
Takeoff-rejected takeoff	Runway excursion
Takeoff-rejected takeoff	Landing gear collapse

On February 14, 2024, about 1410 central standard time, a Beech 400A airplane, N95GK, was substantially damaged when it was involved in an accident in Bentonville, Arkansas. The two pilots and five passengers were not injured and two passengers had minor injuries. The airplane was operated under the provisions of Title 14 *Code of Federal Regulations* Part 91 as a business flight.

The pilot reported that, while on takeoff from the Bentonville Municipal Airport (VBT), Bentonville, Arkansas, he pulled the airplane’s control yoke aft to rotate for liftoff and the airplane pitched up as expected and the wheels lifted off the ground. He stated the nose of the airplane dropped a little and he added more backpressure on the yoke. When he applied backpressure, he felt a “snap” and there was no longer tension on the controls. The airplane pitched down, and the airplane settled back to the runway. The pilot applied maximum braking and full thrust reverse; however, the airplane continued off the end of the runway. The pilot stated there was a gas station in front of them, so he applied left rudder and brake to turn the airplane with hope that the gear would collapse, and the airplane would come to a stop. Substantial damage was sustained to the right wing.

FAA inspectors responded to the accident site and conducted a visual examination of the airplane and the flight controls. The elevator control cable was found separated near the vertical stabilizer.

The elevator control cables, pulley, guard pins, and wire fragments were sent to the NTSB Materials Laboratory for further examination. The separated elevator control cable was fractured near the aft end of the fuselage where the cable transitioned from a horizontal to a vertical orientation at a pulley assembly bracket. The surface of the pulley contained several isolated wire fragments. The elevator cable was covered in grease, including wires at the fractured ends. The cable ends on each side of the fracture were bent with a similar radius on each side. Many wires were displaced from the strands on both sides of the fracture, and many of the displaced wires were also bent back away from the fractured ends. A close-view examination of the fractured cable ends found external wear on the side of the cable facing the inside radius on the bend adjacent the fracture. Nearly all the wires of the cable had damage

consistent with rubbing around the sides of the wires near the fracture. The fractures had rough features consistent with overstress fracture. Examination of the guard pins found that the upper guard pin was missing most of its cadmium plating. The middle portion of the upper guard pin had a rubbed surface appearance. The side walls on either side of the split line were worn with material missing to form a shallow depression. The rubbed areas had scratch marks and gouges in various orientations with the greatest density located near the middle of the pin on either side of the split line. The geometry of the marks and gouges appeared consistent with contact with splayed wires from the fractured control cable.

A postaccident review of the maintenance logbook entries found that both the Up and Down elevator cables were replaced on January 31, 2023, at an airframe total time of 10,745.9 hours. The airplane subsequently flew about 316.5 hours before the cable separated.

### Pilot Information

<b>Certificate:</b>	Airline transport; Commercial; Flight instructor	<b>Age:</b>	62, Male
<b>Airplane Rating(s):</b>	Single-engine land; Multi-engine land	<b>Seat Occupied:</b>	Left
<b>Other Aircraft Rating(s):</b>	Helicopter	<b>Restraint Used:</b>	4-point
<b>Instrument Rating(s):</b>	Airplane	<b>Second Pilot Present:</b>	Yes
<b>Instructor Rating(s):</b>	Airplane multi-engine; Airplane single-engine; Helicopter; Instrument airplane	<b>Toxicology Performed:</b>	
<b>Medical Certification:</b>	Class 2 Without waivers/limitations	<b>Last FAA Medical Exam:</b>	August 20, 2023
<b>Occupational Pilot:</b>	Yes	<b>Last Flight Review or Equivalent:</b>	January 9, 2024
<b>Flight Time:</b>	20000 hours (Total, all aircraft), 2000 hours (Total, this make and model), 17500 hours (Pilot In Command, all aircraft), 80 hours (Last 90 days, all aircraft), 50 hours (Last 30 days, all aircraft)		

## Co-pilot Information

<b>Certificate:</b>	Commercial; Flight instructor	<b>Age:</b>	23,Female
<b>Airplane Rating(s):</b>	Single-engine land; Multi-engine land	<b>Seat Occupied:</b>	Right
<b>Other Aircraft Rating(s):</b>	None	<b>Restraint Used:</b>	4-point
<b>Instrument Rating(s):</b>	Airplane	<b>Second Pilot Present:</b>	Yes
<b>Instructor Rating(s):</b>	Airplane single-engine; Instrument airplane	<b>Toxicology Performed:</b>	
<b>Medical Certification:</b>	Class 1 Without waivers/limitations	<b>Last FAA Medical Exam:</b>	January 20, 2023
<b>Occupational Pilot:</b>	Yes	<b>Last Flight Review or Equivalent:</b>	March 5, 2022
<b>Flight Time:</b>	961 hours (Total, all aircraft), 227 hours (Total, this make and model), 630 hours (Pilot In Command, all aircraft), 71 hours (Last 90 days, all aircraft), 16 hours (Last 30 days, all aircraft)		

## Aircraft and Owner/Operator Information

<b>Aircraft Make:</b>	Beech	<b>Registration:</b>	N95GK
<b>Model/Series:</b>	400 A	<b>Aircraft Category:</b>	Airplane
<b>Year of Manufacture:</b>	1991	<b>Amateur Built:</b>	
<b>Airworthiness Certificate:</b>	Transport	<b>Serial Number:</b>	RK-27
<b>Landing Gear Type:</b>	Retractable - Tricycle	<b>Seats:</b>	9
<b>Date/Type of Last Inspection:</b>	November 16, 2023 Continuous airworthiness	<b>Certified Max Gross Wt.:</b>	16300 lbs
<b>Time Since Last Inspection:</b>	84 Hrs	<b>Engines:</b>	2 Turbo fan
<b>Airframe Total Time:</b>	11062.4 Hrs at time of accident	<b>Engine Manufacturer:</b>	Pratt & Whitney Canada
<b>ELT:</b>	Installed, not activated	<b>Engine Model/Series:</b>	JT15D-5B
<b>Registered Owner:</b>	PDII LLC	<b>Rated Power:</b>	2900 Lbs thrust
<b>Operator:</b>	PDII LLC	<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>	KVBT, 1296 ft msl	<b>Distance from Accident Site:</b>	1 Nautical Miles
<b>Observation Time:</b>	13:56 Local	<b>Direction from Accident Site:</b>	11°
<b>Lowest Cloud Condition:</b>	Clear	<b>Visibility</b>	10 miles
<b>Lowest Ceiling:</b>	None	<b>Visibility (RVR):</b>	
<b>Wind Speed/Gusts:</b>	9 knots / 16 knots	<b>Turbulence Type Forecast/Actual:</b>	/
<b>Wind Direction:</b>	210°	<b>Turbulence Severity Forecast/Actual:</b>	/
<b>Altimeter Setting:</b>	30.06 inches Hg	<b>Temperature/Dew Point:</b>	18°C / 3°C
<b>Precipitation and Obscuration:</b>	No Obscuration; No Precipitation		
<b>Departure Point:</b>	Bentonville, AR	<b>Type of Flight Plan Filed:</b>	IFR
<b>Destination:</b>	Concord, NC (KJQF)	<b>Type of Clearance:</b>	None
<b>Departure Time:</b>		<b>Type of Airspace:</b>	Class G

## Airport Information

<b>Airport:</b>	BENTONVILLE MUNI/LOUISE M THADEN FLD VBT	<b>Runway Surface Type:</b>	Asphalt
<b>Airport Elevation:</b>	1298 ft msl	<b>Runway Surface Condition:</b>	Dry
<b>Runway Used:</b>	18	<b>IFR Approach:</b>	None
<b>Runway Length/Width:</b>	5053 ft / 75 ft	<b>VFR Approach/Landing:</b>	None

## Wreckage and Impact Information

<b>Crew Injuries:</b>	2 None	<b>Aircraft Damage:</b>	Substantial
<b>Passenger Injuries:</b>	2 Minor, 5 None	<b>Aircraft Fire:</b>	None
<b>Ground Injuries:</b>	N/A	<b>Aircraft Explosion:</b>	None
<b>Total Injuries:</b>	2 Minor, 7 None	<b>Latitude, Longitude:</b>	36.33987,-94.219418(est)

## Administrative Information

<b>Investigator In Charge (IIC):</b>	Aguilera, Jason
<b>Additional Participating Persons:</b>	Danny Brickey; FAA FSDO; Little Rock, AR Henry Soderland; Textron Aviation; Wichita, KS
<b>Original Publish Date:</b>	April 24, 2025
<b>Last Revision Date:</b>	
<b>Investigation Class:</b>	<a href="#">Class 3</a>
<b>Note:</b>	The NTSB did not travel to the scene of this accident.
<b>Investigation Docket:</b>	<a href="https://data.nts.gov/Docket?ProjectID=193801">https://data.nts.gov/Docket?ProjectID=193801</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](#).