



Aviation Investigation Preliminary Report

Location:	Boca Raton, FL	Accident Number:	ERA25FA173
Date & Time:	April 11, 2025, 10:23 Local	Registration:	N8930N
Aircraft:	Cessna 310R	Injuries:	3 Fatal, 1 Minor
Flight Conducted Under:	Part 91: General aviation - Personal		

On April 11, 2025, at 1023 eastern daylight time, a Cessna 310R, N8930N, was destroyed when it was involved in an accident near Boca Raton, Florida. The two pilots and the passenger were fatally injured, and one person on the ground sustained minor injuries. The airplane was operated as a Title 14 *Code of Federal Regulations* Part 91 personal flight.

The accident flight was the first flight after the airplane's annual inspection had been completed. The airplane departed from the Boca Raton Airport (BCT), Boca Raton, Florida, and was destined for the Tallahassee International Airport (TLH), Tallahassee, Florida. A portion of the airplane's taxi and departure were captured by airport surveillance video. The video of the taxi revealed that the airplane made several left and right turns as it transitioned to the runup area and runway. The video of the airplane's takeoff revealed that the airplane maintained the centerline of the runway during the takeoff roll. Shortly after rotation, the airplane yawed to the left and continued in a left turn until the airplane went out of view. The airplane then momentarily reentered the camera frame, as it continued in a left yaw and left turn.

Several witnesses captured videos of the airplane while in flight. The videos depicted the airplane in a left yaw at a low altitude. Audio from the videos were consistent with both engines operating.

Preliminary ADS-B data revealed that immediately after takeoff, at 1012, the airplane drifted to the left, followed by a left 180° turn, followed by a left 360° turn. The airplane continued making several left 360° turns; the last data point was on the airplane's 9th turn at 1022 and was 273 ft south of the initial impact point. According to preliminary air traffic control recordings, one of the pilots reported that they were having a problem with the airplane's rudder and that they could only make left turns.

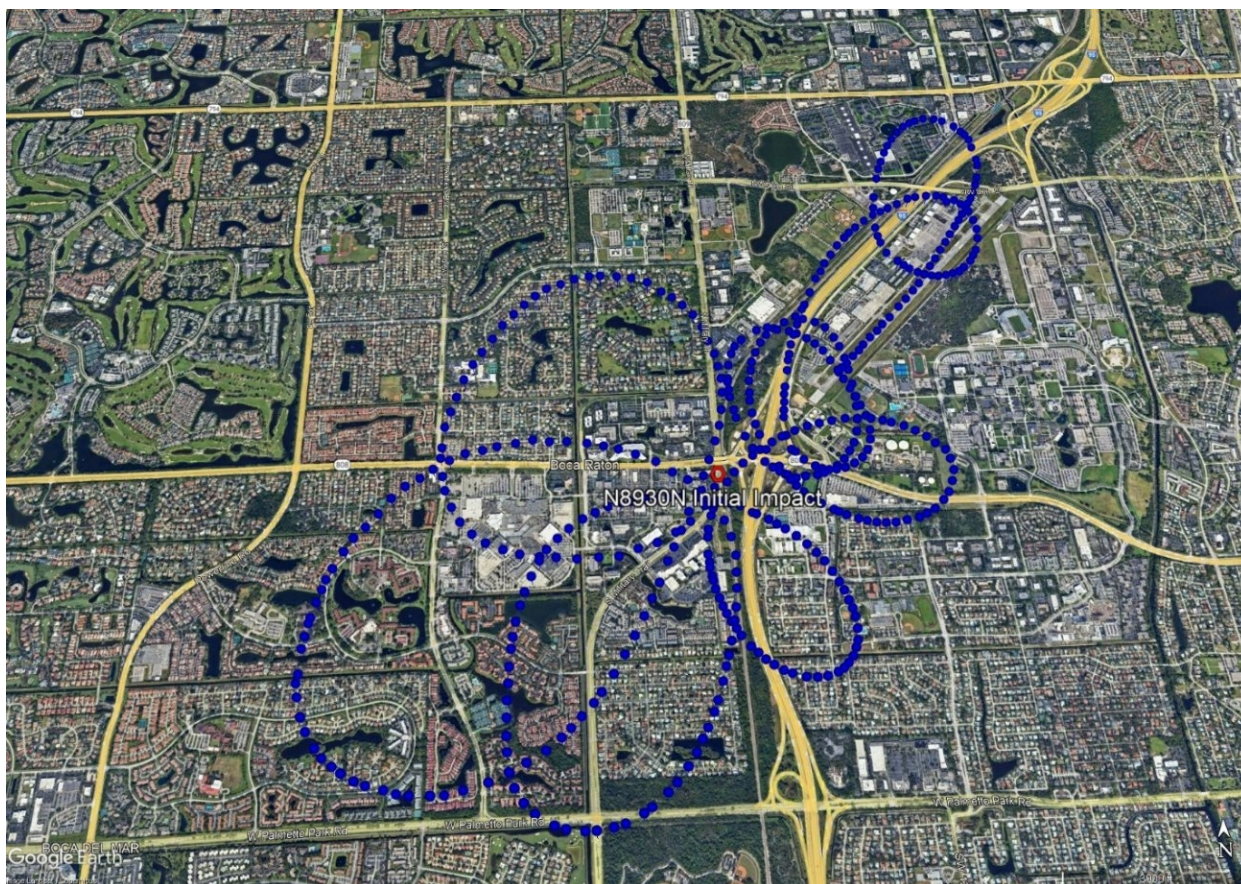


Figure 1. Preliminary ADS-B Flight Track with initial impact point marked.

The airplane's initial impact point was identified to be several trees in the median of a road. The airplane then impacted the road, and the wreckage path continued until the main wreckage site, which was on a set of railroad tracks, about 370 ft from the initial impact point. The furthest piece of wreckage was identified as the left engine and was found 320 ft past the main wreckage location. The wreckage was highly fragmented, and there was a postimpact fire. The fuselage, including the cockpit, sustained significant thermal damage from the postimpact fire, and most of the fuselage and cockpit had been consumed. All the major components of the airplane were located at the accident site.

The airplane's rudder was found near the initial impact point and exhibited impact and thermal damage. The rudder trim tab remained attached to the rudder and displayed minor impact damage. Flight control cable continuity for the right rudder was confirmed and was continuous from the rudder pedal attach point to the rudder bellcrank attach bracket; however, the rudder bellcrank attach bracket had separated from the rest of the bellcrank. There were no visible signs of fretting between the rudder cable attach bracket and the rudder bellcrank. The left rudder cable was fractured near the rudder pedal attach point and at the rudder bellcrank. The separated cable ends exhibited a splayed, broomstrawed appearance, consistent with tension overload separation. Both cables were attached to their correct installation locations. The

rudder trim actuator remained attached to the vertical stabilizer, and the rudder trim chain remained attached to the actuator's sprocket. The rudder trim rod end extension was measured to be 1.5", which corresponded to 21° trim tab trailing edge right (left rudder). Both rudder trim cables were fractured in the cockpit consistent with tension overload.

Flight control continuity for the elevator was established and the elevator control cables were continuous and remained attached to the fuselage elevator sector and the elevator bellcrank. The push/pull rod for the elevator bellcrank to the elevator was impact damaged and fractured, and the push/pull rod for the control column to the elevator sector was impact separated near the elevator sector. The elevator trim actuator displayed impact damage, and the elevator trim chain was detached from the actuator's sprocket. The elevator trim was measured to have a length of 2.0", which corresponded to 11° trim tab trailing edge up (elevator down).

Flight control cable continuity was established for the right aileron from the wing bellcrank to the cockpit controls through breaks that were consistent with tension overload or recovery cuts. Flight control continuity for the left aileron was confirmed through breaks that were consistent with tension overload or recovery cuts. The aileron control cable chains remained attached to the control column and control wheel sprockets. The aileron trim actuator remained attached to its installation point and displayed impact damage signatures. The aileron trim chain remained attached to the aileron trim actuator sprocket and both aileron trim cables were separated and displayed tension overload signatures. The aileron trim actuator was measured to have an extension length of 1.9", which corresponded to 13° trim tab trailing edge up (right roll).

Both engines separated from their installation points and displayed impact damage signatures. The left engine's No.1 cylinder head had broken free from the cylinder barrel and the crankcase was impact-damaged near the bottom forward portion of the crankcase. The crankshaft could only be rotated a few degrees, and continuity was established between the crankshaft and the camshaft. The right engine's crankshaft was unable to be rotated which was consistent with the observed impact damage. The Nos. 1- and 5-cylinder heads had broken free from their respective cylinder barrels and were found along the wreckage path. The crankcase had significant impact damage to the forward bottom section of the case, and the forward camshaft gear was visible through the broken crankcase and had partially fractured. The intact cylinders were inspected utilizing a lighted borescope, and the piston faces, cylinder walls, and valve heads displayed normal operating and combustion signatures.

The left propeller had separated from the crankshaft propeller flange and was found along the wreckage path. All three propeller blades remained within the propeller hub and displayed impact damage. One propeller blade displayed torsional deformation, leading edge polishing and there were several gouges in the trailing edge. A second propeller blade displayed aft, tip curling, polishing of the cambered side, and gouges in the trailing edge. The third propeller blade displayed aft bending deformation, torsional deformation, and S-bending deformation. The right propeller had separated from the crankshaft propeller flange and was found along

the wreckage path. One of the propeller blades had separated from the propeller hub and was found along the wreckage path. The separated propeller blade displayed S-bending deformation and leading edge polishing. The second propeller blade displayed aft bending deformation, tip curling, and S-bending deformation. The third propeller blade displayed S-bending deformation and leading edge polishing.

The wreckage was retained for further examination.

Aircraft and Owner/Operator Information

Aircraft Make:	Cessna	Registration:	N8930N
Model/Series:	310R	Aircraft Category:	Airplane
Amateur Built:			
Operator:	On file	Operating Certificate(s) Held:	None
Operator Designator Code:			

Meteorological Information and Flight Plan

Conditions at Accident Site:	VMC	Condition of Light:	Day
Observation Facility, Elevation:	BCT, 13 ft msl	Observation Time:	09:53 Local
Distance from Accident Site:	1 Nautical Miles	Temperature/Dew Point:	26°C / 17°C
Lowest Cloud Condition:	Few / 3000 ft AGL	Wind Speed/Gusts, Direction:	5 knots / None, 350°
Lowest Ceiling:		Visibility:	10 miles
Altimeter Setting:	30.08 inches Hg	Type of Flight Plan Filed:	IFR
Departure Point:	Boca Raton, FL	Destination:	Tallahassee, FL (TLH)

Wreckage and Impact Information

Crew Injuries:	2 Fatal	Aircraft Damage:	Destroyed
Passenger Injuries:	1 Fatal	Aircraft Fire:	On-ground
Ground Injuries:	1 Minor	Aircraft Explosion:	None
Total Injuries:	3 Fatal, 1 Minor	Latitude, Longitude:	26.368119,-80.120771

Administrative Information

Investigator In Charge (IIC): Gibson, Kurt

Additional Participating Persons: Casey Love; Textron Aviation; Wichita, KS
Julie Crowell; Continental Aerospace Technologies; Mobile, AL
Michael Valdez; FAA/FSDO; Miramar, FL

Investigation Class: [Class 3](#)

Note: