

National Transportation Safety Board

Office of Aviation Safety

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WRECKAGE EXAMINATION

May 4, 2024

Table of Contents

A. ACCIDENT.....	3
B. WRECKAGE EXAMINATION.....	3
C. SUMMARY	4
D. DETAILS OF THE EXAMINATION.....	4
1.0 ACCIDENT SITE	4
2.0 AIRFRAME EXAMINATION.....	5
2.1 Fuselage.....	5
2.2 Empennage	6
2.3 Wings.....	6
2.4 Landing Gear.....	6
2.5 Cockpit.....	6
2.6 Survivability.....	7
2.7 Fuel/Fuel System.....	7
3.0 ENGINE EXAMINATION	7
4.0 PROPELLER EXAMINATION	8

A. ACCIDENT

Location: Augusta, Georgia
Date: May 2, 2024
Time: 0713 EDT
1113 UTC
Airplane: N629BE; Raytheon Aircraft Company A36

B. WRECKAGE EXAMINATION

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C. SUMMARY

On May 2, 2024, about 0713 eastern daylight time, a Raytheon Aircraft Company A36 airplane, N629BE, was destroyed when it was involved in an accident near Augusta, Georgia. The private pilot was fatally injured. The airplane was operated as a Title 14 *Code of Federal Regulations* Part 91 personal flight.

D. DETAILS OF THE EXAMINATION

1.0 Accident Site

The airplane initially collided with the top of a large oak tree, severing the outboard half of the left wing. The outboard wing section remained lodged in the tree, about 60 ft above the ground. The airplane continued and impacted the front yard of a residence, coming to rest upright at coordinates 33.47759, -82.03308 (Figure 1).

The magnetic heading from the initial tree strike to the main wreckage was 240°, and the fuselage was found oriented on a heading of 265°. The entire wreckage path was about 150 ft long and about 55 ft wide. The descent angle from the initial tree strike to the first point of ground impact was about 31°.

All structural components of the airframe, engine, and propeller were accounted for at the accident site. A main wreckage came to rest upright on a residential lot, against some ornamental trees and shrubs. The forward fuselage and cockpit were consumed in a postaccident fire.



Figure 1 - Wreckage Diagram

2.0 Airframe Examination

The wreckage was examined and documented at the accident site on May 2-3, 2024. A follow-up examination at Atlanta Air Recovery, Griffin, Georgia was performed on May 4, 2024.

2.1 Fuselage

The fuselage exhibited extreme thermal damage and most cockpit instruments and controls were destroyed.

All flight control surfaces were observed. Flight control cable continuity was partially established from all control surfaces to the cockpit with multiple overload separations. The flaps were in the up position.

2.2 Empennage

The vertical stabilizer and rudder remained attached to the airframe and displayed minor heat damage. The left horizontal stabilizer and elevator remained attached to the airframe and displayed minor impact damage and heat signatures. The right horizontal stabilizer and elevator were separated from impact forces, were fragmented, and displayed heat signatures.

2.3 Wings

The left wing separated outboard of the wheel well and was found lodged around tree branches approximately 60 ft above the ground. This wing section was removed from the trees by local fire department personnel. Two 10-in tree indentations were observed at the leading edge of the left wing. The left aileron remained in place on the separated section of wing; it was bent and buckled. The outboard half of the left wing flap remained on the separated section of wing. The inboard section of the left wing remained attached to the fuselage; it exhibited thermal and impact damage.

The right wing remained attached to the fuselage. The right aileron and flap also remained partially attached to the wing. The inboard half of the right wing exhibited extensive postaccident fire damage. The outboard half exhibited light fire damage.

2.4 Landing Gear

The landing gear selector and actuators were found in the extended (down) positions. The nose gear separated from the airframe during the impact sequence and was found in a yard, about 50 ft southeast of the main wreckage. The right main gear separated from the airframe during the impact sequence and was found in the same yard, about 17 ft northeast of the main wreckage. The left main gear was found extended with the left wing in the main wreckage.

2.5 Cockpit

The cockpit was consumed by postaccident fire. A Garmin G5 electronic flight instrument was installed. A fire-damaged SD-card was removed from the unit and sent to the NTSB Vehicle Recorders Laboratory for examination and possible data recovery.

The fuel tank selector handle was found in the right tank position; the corresponding fuel selector valve was also found in the right tank position.

Due to the postaccident fire damage, no cockpit instrument readings were legible.

Due to postaccident fire and impact damage, the engine control positions at the time of ground impact could not be determined.

2.6 Survivability

The accident was not survivable. The cockpit seats were fitted with 3-point restraints; all seats and restraints were fire-damaged.

The emergency locator transmitter was fire-damaged and its identifying information was not legible.

2.7 Fuel/Fuel System

The airframe fuel system could not be examined due to the postimpact fire. All four fuel caps were observed locked and secured. Approximately 12 gallons of blue-colored fuel were recovered from the right tip tank and right main tank.

The left tip tank separated during impact and was thermally damaged; it was compromised and contained no fuel.

3.0 Engine Examination

The Tornado Alley-modified Continental engine remained partially attached to the airframe by wires and cables.

The top spark plugs were removed for examination; all electrodes were normal in color and wear when compared to a Champion Check-a-Plug chart.

The engine was rotated by hand and continuity was confirmed from the fractured forward crankshaft to the rear accessory drives. Thumb compression and suction were obtained on all cylinders and valve action was correct.

Both magnetos were removed and rotated by hand, sparks were observed on all leads of the left magneto and all but two leads of the right magneto. The magnetos were sent to the engine manufacturer's facility for additional examination.

Fuel was present at the fuel divider. All fuel injectors were free of debris. The engine-driven fuel pump drive shaft was intact.

All cylinders were borescoped, and no abnormal observations were noted. The turbocharger spun freely when rotated by hand.

The engine oil filter was opened and the paper element unfolded; it was free of particulates and metallic debris.

4.0 Propeller Examination

The Hartzell three-bladed, adjustable pitch propeller separated from the engine during impact. All blades had extensive gouging damage, tearing, twisting, bending deformations, and fractured blade tips. Multiple angular tree cuts were observed along the wreckage path.

Submitted by:

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