

# National Transportation Safety Board

Office of Aviation Safety

Washington, DC 20594



CEN23FA360-N7910P

## **WRECKAGE SUMMARY**

August 13, 2023

## ACCIDENT

Location: Oklahoma City, Oklahoma  
Date: August 13, 2023  
Time: 12:50 CDT

Airplane: Piper PA-24

IIC Laura Abraham  
NTSB  
Aurora, CO

Party Member Jon Hirsch  
Piper Aircraft  
Vero Beach, FL

Party Member Troy Helgeson  
Lycoming Engines  
Williamsport, PA

FAA Lonnie Bruce Jeffcoat and Maxwell Bradley  
Oklahoma City, OK

## SUMMARY

About 360 ft east of Interstate 235 and 1300 ft south of Interstate 40, the airplane impacted power lines about 95 feet above ground level on a heading of about 348° before impacting a sloped grassy area on the east side of Interstate 235 at an elevation of about 1,198 ft mean sea level. The airplane traveled about 40 ft from the impact site to the main wreckage area and came to rest upright on a heading of about 150°.

The propeller was impact separated at the flange and two distinct propeller blade gouge marks were found on the ground about 18 in apart. The first gouge was about 8 in deep and the second was about 3 in deep. The propeller came to rest vertically about 15 ft east of the main wreckage with one blade embedded about 8 in in the ground.

The right-wing tip and about 2 ft of the outboard right wing were found directly beneath the powerlines. The left wing tore away from the fuselage and was separated into two pieces; however, both pieces were still attached to the fuselage by aileron cables. The right wing was still attached to the fuselage with the exception of the right-wing tip and 2 ft of the right outboard side. The ailerons were impact separated from the left and right wings. The left aileron was about 7 ft east of the

main wreckage, and the right aileron was about 12 ft west of the main wreckage. The vertical stabilizer, rudder, horizontal stabilizer, and elevator were still attached to the fuselage. All engine accessories remained attached to the engine. The engine was attached to the engine mount, and the engine mount was attached to the firewall. The landing gear was in the retracted position and remained attached to the fuselage. The debris field, about 40 ft long and 20 ft wide, was situated on an east to west heading, and contained the left-wing tip and shattered wind screen. The grass along the debris path exhibited a considerable amount of fuel blight.

## **Fuselage**

The left side of the fuselage forward of the left-wing root and the left portion of the cowling were crushed and torn due to impact damage. The aft left portion of the fuselage was wrinkled and bent. The right side of the fuselage was wrinkled and bent.

## **Empennage**

The vertical stabilizer, rudder, horizontal stabilizer, and elevator were still attached to the fuselage. The vertical stabilizer and rudder were slightly bent and wrinkled. The horizontal stabilizer and elevator were not damaged. Control cable continuity was established from the rudder pedals to the rudder and the yoke to the elevator.

## **Wings**

The right-wing tip and about two ft of the outboard right wing were severed by the power line and found under the power lines. The remainder of the right wing, with flap attached, remained attached to the fuselage and were bent and wrinkled. The right aileron was impact separated and found about 12 ft west of the main wreckage. The left wing exhibited crush damage along the leading edge, and the left-wing tip was impact separated and found along the debris path. The left-wing tore away from the fuselage and separated into two pieces; however, the pieces were still attached to each other and to the fuselage by the aileron cables. The left flap was still attached to the left wing. Both left and right flaps were in the "up" position. The ailerons could not be functionally tested due to the impact separation; however, the aileron cables were traced back to the yoke.

## **Landing Gear**

The landing gear was in the retracted position and remained attached to the fuselage.

## **Cockpit**

The cockpit was impact damaged especially on the left side; however, all avionics and gauges were still attached to the panel. The throttle, mixture, carburetor heat, and propeller control were found in the full forward positions. The altimeter setting in the Kollsman window was set to a 30.08.

## **Fuel/Fuel System**

The main tank and auxiliary tank on the left wing were crushed due to impact damage and could not be functionally tested. The right main tank did not have any fuel in it, and the right auxiliary tank was full of fuel. The fuel selector valve was set to the right main tank. The right auxiliary tank was drained for transport, and then both the right main and right auxiliary tank were filled with water during the examination and did not leak.

## **Engine Examination**

All engine accessories were attached to the engine. The engine was attached to the engine mount, and the engine mount remained attached to the firewall. Inspection of the engine revealed that the right side of the exhaust was cracked inside the carburetor heat shroud. There was exhaust soot in the scat tubing to the carburetor heat box. The carburetor heat box was crushed, and the carburetor heat valve seal was worn out. The carburetor heat valve plate was wearing a hole through the carburetor heat box. The carburetor heat valve arm was broken. There was a low thumb compression on the number 2 cylinder. The cylinders were borescoped and minor scoring was noted on the number 2 cylinder. After removing the number 2 cylinder, impact damage was noted to the intact rocker shaft boss capturing the intake valve in the open position. The engine rotated and thumb compressions were good on the remaining cylinders. Engine continuity was confirmed. The oil pick-up screen was found free of debris. The carburetor was broken off from the flange from impact. The carburetor was disassembled, and no anomalies noted. The carburetor inlet screen was found with minor particles in it. Both magnetos rotated by hand and a spark observed from all leads. The engine driven fuel pump operated by hand and pressure was felt at the outlet.

## **Propeller Examination**

The propeller separated from the flange and was found along the debris field about 15 ft east of the main wreckage with one of the blades embedded in the ground about 8 in. One of the blades was found in the feathered position. The other two blades were not feathered. Two blades were bent but not twisted. The third blade was not bent or twisted. All three blades exhibited chordwise scratching.

## **Pilot Information**

The pilot had a current third class medical, which he obtained in March of 2023. Logbook review revealed that he had a biennial flight review in May of 2023. The pilot was certificated in airplane single-engine land with instrument rating.

Submitted by:

Laura Abraham  
Air Safety Investigator