

National Transportation Safety Board

Office of Aviation Safety

Washington, DC 20594



ERA23LA310

EXAMINATION REPORT

February 23, 2024

A. ACCIDENT

Location: Stanly County Airport (VUJ), Albemarle, North Carolina.
Date: July 24, 2023
Time: 1630
2030 UTC
Airplane: Piper PA-28-140, N98134

B. EXAMINATION REPORT

IIC Aaron McCarter
NTSB IIC
Eastern Region

C. SUMMARY

On July 24, 2023, about 1630 eastern daylight time, a Piper PA-28-140, N98134, was substantially damaged when it was involved in an accident near New London, North Carolina. The flight instructor sustained minor injuries and the student pilot was seriously injured. The airplane was operated as a Title 14 *Code of Federal Regulations* Part 91 instructional flight.

The instructional flight departed from Stanly County Airport (VUJ), Albemarle, North Carolina. During the subsequent climb, upon reaching 1,900 ft mean sea, the engine rpm started to drop. The flight instructor immediately took control of the airplane and pitched for best glide speed while attempting to troubleshoot via the checklist but was unable to regain full power.

The flight instructor attempted to return to VUJ; however, the airplane was descending too quickly, and he was unable to reach the airport and struck trees on short final for the forced landing.

D. DETAILS OF THE EXAMINATION

1.0 Accident Site

The right wing had separated during impact and the fuel tanks were breached. The fuselage was crushed forward from the engine compartment into the cockpit. The airplane was resting on its nose in an inverted attitude with the engine and propeller rested on the ground and were canted upwards and aft into the cockpit instrument panel. The entire aircraft was being suspended by electrical transmission wires that were wrapped around the stabilator.



Figure 1 Airplane wreckage as it was discovered.

2.0 Propeller

The 2-bladed metal propellers showed evidence of minor chordwise scraping and one blade was bent uniformly aft mid span. The propeller remained attached to the flange and crankshaft and the propeller spinner was crushed inwards in a relatively flat pattern indicative of reduced power.

2.1 Empennage

The empennage remained intact; the vertical and horizontal stabilizers, and their respective rudder and stabilizers/trim, remained attached to their respective attachment points and functioned freely with corresponding flight control cable movements. There was leading edge R stabilator damage caused by the transmission/electrical line.

2.2 Wings

Right wing was separated. Left wing partially separated near the wing root.



Figure 2 Airplane wreckage from bottom of aircraft showing wing separation.

2.3 Fuel/Fuel System

The fuel system was damaged by impact and the fuel tanks were compromised. The fuel selector and fuel lines in the wings leading up to the gascolator were free of debris/blockages.

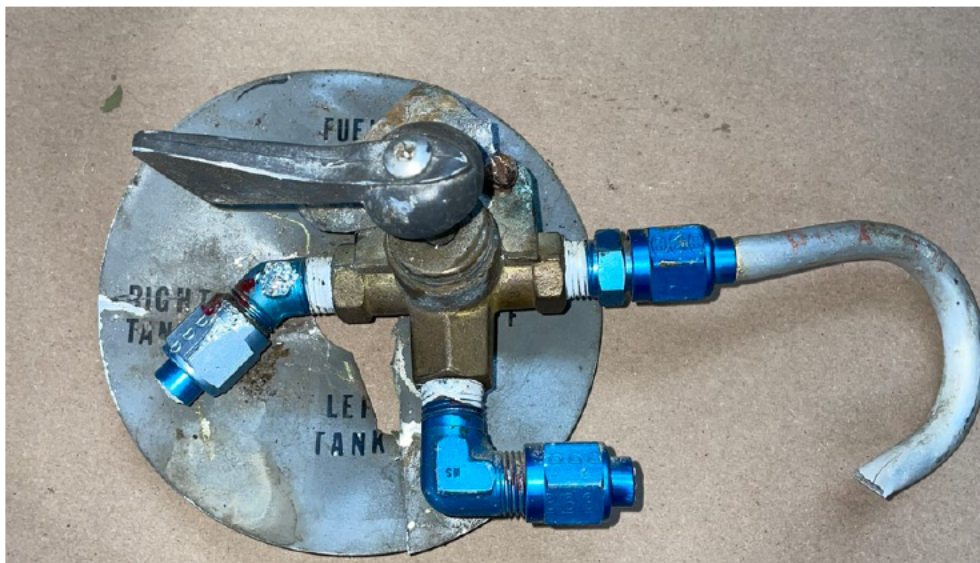


Figure 3 Fuel selector valve.

2.4 Magnetos

Left and Right Magnetos and all associated leads and terminals were not damaged, and an electric drill was used to manipulate the magnetos. On both left and right mag produced healthy blue/purple spark.



Figure 4 Magnetos.

3.0 Engine Examination

Engine examination continuity check, compression was obtained on cylinder Nos. 1,2, 3; no compression was obtained on No. 4. The No. 4 cylinder exhaust valve was stuck in the open position but became unstuck during manual manipulation; light taps with a rubber mallet. Unable to reproduce the stuck valve after.

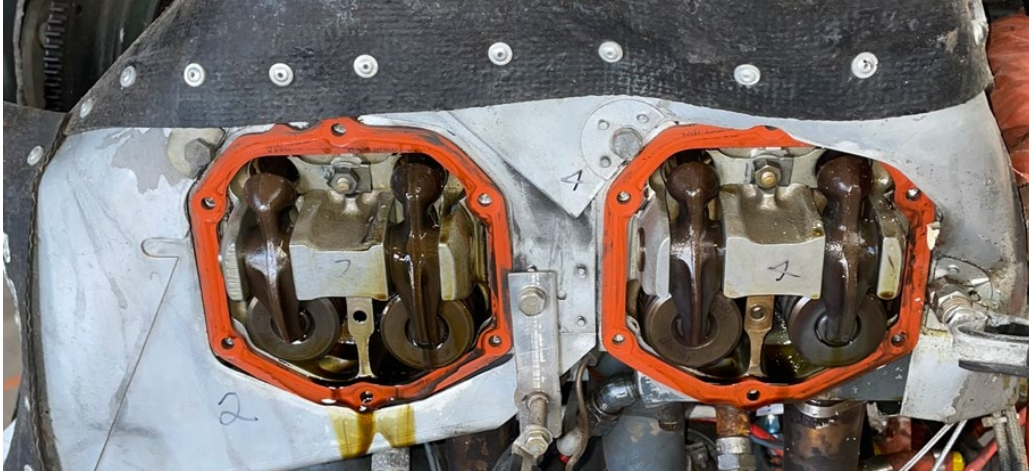


Figure 5 The number 2 and 4 cylinder assembly. No 4 had stuck valve.

The Nos. 3 and 4 spark plugs contained minor carbon build up on the electrodes, the rest had normal coloration as compared to the Champion Aerospace AV-27 Check-A-Plug chart.



Figure 6 Top spark plugs.

The oil filter was opened revealing no foreign deposits or ferrous material. The oil appeared dark brown in color and all lubricated components appeared to be well lubricated.

5.0 Meteorological Information

Location.....: KVUJ

Day of month.....: 24

Time.....: 20:25 UTC

Report is fully automated, with no human intervention or oversight.

Wind.....: true direction = 250 degrees; speed = 4 knots

Visibility.....: 10 Statute Miles

Cloud coverage.....: scattered (3 to 4 oktas) at 3700 feet above aerodrome level

Temperature.....: 31 degrees Celsius

Dewpoint.....: 21 degrees Celsius

QNH.....: 30.12 inHg

Submitted by:

Aaron McCarter

NTSB Aviation Accident Investigator (IIC)