

National Transportation Safety Board

Office of Aviation Safety

Washington, DC 20594



ERA25LA012

WRECKAGE EXAMINATION REPORT

January, 22 2026

TABLE OF CONTENTS

A. ACCIDENT	3
B. WRECKAGE EXAMINATION REPORT	3
C. SUMMARY	3
D. DETAILS OF THE EXAMINATION.....	4
1.0 AIRFRAME EXAMINATION.....	4
2.0 ENGINE EXAMINATION	6
3.0 PROPELLER EXAMINATION	9

A. ACCIDENT

Location: Louisville, KY
Date: 10/11/2024
Time: 18:20 EDT

Airplane: Piper PA-28 (Registration: N5006W)

B. WRECKAGE EXAMINATION REPORT

IIC Kurt Gibson
NTSB
Washington, D.C.

Investigator Lucas Winn
NTSB
Washington, D.C.

Party Coordinator Alex Whittington
FAA
Louisville, KY

Party Coordinator Michael Childers
Lycoming Engines
Williamsport, PA

Party Coordinator Sean Holloway
Piper Aircraft
Vero Beach, FL

C. SUMMARY

The wreckage was examined at AMF Aviation in Springfield, TN, after the airplane had been recovered. The only mechanical anomaly found during the examination was that the left fuel tank vent line was obstructed; however, the left fuel tank vented fuel cap was clear of obstructions. No further mechanical failures or malfunctions were observed that would have prevented normal operation. The carburetor was retained for further testing and examination.

D. DETAILS OF THE EXAMINATION

1.0 Airframe Examination

The airframe had sustained substantial damage to both wings, fuselage, and empennage. The left wing, empennage, and the fuselage just aft of the instrument panel were cut by recovery personnel to facilitate transport.

Flight control continuity was established for the rudder, stabilator trim, both ailerons, and the flaps through breaks that were consistent with recovery cuts. Flight control continuity was established for the stabilator through a break consistent with a recovery cut and another consistent with tension overload. The flap handle was found in the 2nd notch position. The throttle and mixture controls were found near the full forward positions. The carburetor heat control was impact-damaged, and its position could not be positively determined.

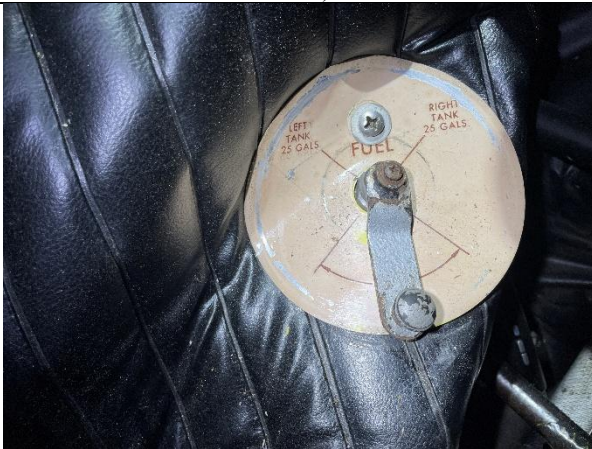
The fuel selector valve was found in between the two "OFF" detents and no air was observed when blowing low-pressure air through the valve. The fuel selector valve was tested in the "LEFT" and "RIGHT" positions utilizing low-pressure air, and the selector valve operated normally. Tactile detents were present in each position of the selector valve handle. The fuel line going from the airplane's firewall to the fuel strainer was noted to be kinked and displayed dry rot; however, it was not obstructed. The fuel strainer bowl had partially separated, which was consistent with the observed impact damage. The strainer screen was removed, was found to be unobstructed, and the strainer bowl was clean. Fuel line continuity was established from the fuel selector valve to the left and right fuel tanks; they were found to be unobstructed, and all separations were consistent with impact damage and recovery cuts. Both fuel tank inlet screens were observed and were found to be unobstructed. The right fuel tank vent line was found to be unobstructed from the fuel tank to the outboard vent. The left fuel tank vent line was found to be obstructed and was cleared using low-pressure air; the obstruction could not be located after clearing the vent line. The left fuel tank cap was a vented cap, and the vent galleys were clear of obstructions. The left fuel tank gasket was found to be dry-rotted; however, it remained pliable. The right fuel tank vented cap gasket and vent gasket were found to be pliable; however, the gasket was dry-rotted. The airframe electrically driven fuel pump was removed and tested by connecting to a 12V battery; the fuel pump was audibly observed to operate.



Photograph 1: Airplane after initial recovery (Source: FAA)



Photograph 2: Airplane after initial recovery (Source: FAA)



Photograph 3: Fuel selector handle as found after initial recovery (Source: FAA)



Photograph 4: Fuel selector valve (Source: NTSB)



Photograph 5: Left fuel cap (Source: NTSB)



Photograph 6: Right fuel cap (Source: NTSB)



Photograph 7: Fuel strainer and screen (Source: Piper Aircraft)



Photograph 8: Electrically driven fuel pump (Source: Piper Aircraft)



Photograph 9: Left fuel tank pickup screen (Source: NTSB)



Photograph 10: Fuel line from firewall to fuel strainer (Source: NTSB)

2.0 Engine Examination

The engine remained attached to the airframe through the engine mounts, hoses, wires, and cables. The engine was removed from the airframe to facilitate examination. Continuity was established between the crankshaft, camshaft, connecting rods, and associated components by rotating the propeller by hand 720°. All four cylinders displayed good thumb compression and suction. The overhead components (valves, springs, and rocker arms) displayed normal operating and lubrication signatures and operated normally during crankshaft rotation. The cylinders were inspected using a lighted borescope; the piston faces, cylinder walls, and valve heads displayed normal operating and combustion signatures.

The oil filter was removed, and the housing was cut open. The filter pleats were inspected, and no anomalies were observed. During crankshaft rotation, it was observed that the oil pump was capable of pumping residual oil.

The fuel pump remained attached to the engine, and both fuel lines were secure. The fuel pump was removed, and the fuel pump plunger was found to operate normally. The fuel pump was manually actuated and was found to be

capable of pumping air. The fuel pump was disassembled, and the internal components displayed normal operating signatures. The fuel line going to the carburetor remained secure, and there were no signs of fuel leaks. Engine control continuity was established by moving the cockpit controls and observing throttle and mixture control movement at the carburetor. The carburetor mixture and throttle control arms were capable of normal movement, and the throttle valve operated normally. The fuel inlet screen was removed and was found to be clear of obstructions. The carburetor was retained for further testing.

Both magnetos remained attached to their installation points and were undamaged. The magnetos were removed, and both were capable of creating a spark on all four of their respective posts. The ignition harness displayed impact damage concentrated near the magnetos. The ignition harness caps remained secured to each magneto, and each ignition lead remained securely attached to each spark plug; no signs of chafing or arcing were observed. The spark plugs were removed and displayed normal wear and operating signatures.

The exhaust system remained attached to the engine and displayed impact damage signatures. The exhaust was removed, and there were no signs of exhaust leaks or obstructions observed.

The induction system displayed impact damage to the airframe airbox. The inlet air filter was impact-damaged and contained debris consistent with accumulation during the accident. The cylinder intake risers were undamaged, and there were no intake leaks or obstructions observed.



Photograph 11: Engine overview (Source: NTSB)



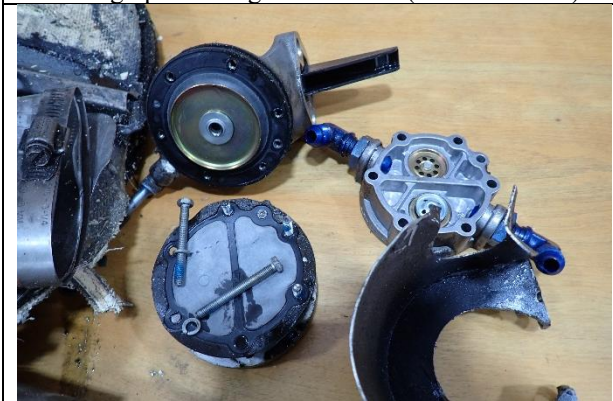
Photograph 12: Engine overview (Source: NTSB)



Photograph 13: Engine overview (Source: NTSB)



Photograph 14: Engine overview (Source: NTSB)



Photograph 15: Engine overview (Source: NTSB)



Photograph 16: Carburetor (Source: NTSB)



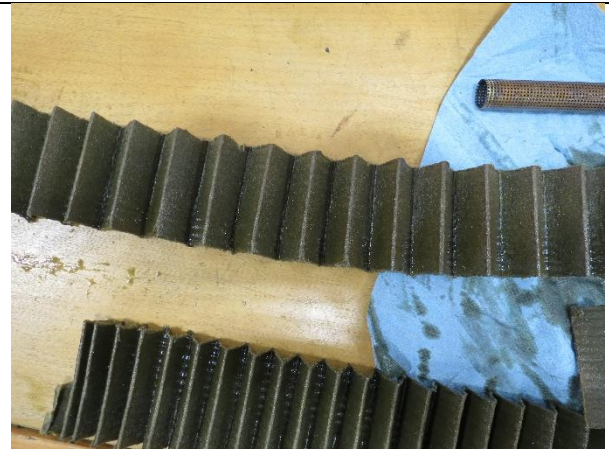
Photograph 17: Carburetor (Source: NTSB)



Photograph 18: Carburetor (Source: NTSB)



Photograph 19: Spark plugs (Source: NTSB)



Photograph 20: Oil filter pleats(Source: Lycoming)

3.0 Propeller Examination

The propeller remained attached to the engine and displayed only a small dent on one of the propeller blades' leading edges. There was no further damage observed.



Photograph 21: Propeller overview



Photograph 22: Propeller overview

Submitted by:

Kurt Gibson
Senior Aviation Accident Investigator