National Transportation Safety Board
Office of Aviation Safety
Washington, DC 20594

ERA23FA200

WRECKAGE EXAMINATION SUMMARY

April 20, 2023

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A. ACCIDENT

Location:	London, Ohio
Date:	April 18, 2023
Time:	1820 EDT 2220 UTC
Airplane:	Cessna 172

B. WRECKAGE EXAMINATION SUMMARY

IIC	Daniel Boggs National Transportation Safety Board Daytona Beach, FL
Party Member	Peter Basile Cessna Aircraft
	Ryan Enders Lycoming Engines

C. SUMMARY

On April 18, 2023, at 1820 eastern daylight time, a Cessna 172N, N734GB, was destroyed when it was involved in an accident near London, Ohio. The pilot and student pilot were fatally injured. The airplane was operated as a Title 14 *Code of Federal Regulations* Part 91 instructional flight.

D. DETAILS OF THE INVESTIGATION

1.0 Accident Site

The accident site was located 1 ft from the end of runway 27, inverted and on a magnetic heading or 270°. The airplane impacted left wing low, nose down, and near vertical attitude. The engine and propeller were compressed aft and up into the fuselage. The instrument panel was fractured in several places and no useful information could be used. The propeller spinner was crushed flat against the propeller. The carburetor was fractured off the engine and found in front of the wreckage about 5 ft away.

2.0 Airframe Examination

The nose landing gear remained partially attached. The left wing sustained tapering compression damage near the tip. The left-wing tip was separated from the wing. All flight control surfaces remained attached to the aircraft. Control cable continuity was established for all flight controls. The elevator trim tab actuator was extended 1.4" which equated to an approximately 5° tab up position. The left flap sustained impact damage and was found in a mid-travel position. The right flap was found extended approximately 40°. The flap actuator jackscrew measured approximately 5.5" which equated to the flaps being extended 40°.

3.0 Engine Examination

The two-bladed metal propeller remained attached to the crankshaft flange via three of the six propeller bolts. The nose cone was compressed around the

propeller hub. One blade was bent aft approximately mid-way. Rotational scoring was noted on the blade bent aft. The second blade remained mostly straight. The carburetor bowl was impact separated from the engine. The throttle plate and mounting flange remained attached to the bottom of the engine sump housing. The throttle plate moved freely. Only one plastic float was recovered. The carburetor inlet screen was separated from the unit and was found attached to the fuel inlet line coming from the airframe. The screen was crushed and contained organic matter. Both magnetos were secured to the accessory housing with no damage noted. The units were removed and both magneto's produced spark at all leads when rotated by hand. The spark plugs remained installed in their respective cylinder heads. The spark plugs were mechanically undamaged and displayed coloration consistent with normal engine operation. The vacuum pump remained installed on the accessory housing and was undamaged. The unit was removed for further analysis. The drive was intact, and the unit pumped air when rotated by hand. The oil suction screen was safety wired in place. The screen was removed for further analysis. Minor carbon debris was noted in the screen.

The oil filter/pressure screen was impact separated from the accessory housing and was not located during the investigation. The propeller was removed to facilitate engine rotation attempts. The engine rotated when force was applied to the crankshaft flange. Thumb compressions were established on all four cylinders and valve action lift was observed on each cylinder. Continuity of the crankshaft to the camshaft was established throughout the engine.

Nothing was found that would have prevented the engine from producing power prior to the accident sequence.

Submitted by:

Daniel Boggs
Air Safety Investigator