



Airframe and Engine Examination Report

NTSB ACCIDENT NUMBER: **ERA21LA091**

AIRCRAFT REGISTRATION: N8311X

AIRCRAFT TYPE: Cessna 172C

ACCIDENT LOCATION: Pleasant Valley, New York

Investigative Team:

NTSB Investigator-in-Charge (IIC): Millicent Hill, Aviation Accident Investigator

NTSB Investigator: Aaron McCarter

Textron: Peter Basille (Air Safety Investigator)

HISTORY OF FLIGHT

On December 27, 2020, about 1500 eastern standard time, a Cessna 172C, N8311X, was substantially damaged when it was involved in an accident near Pleasant Valley, New York. The pilot was not injured. The airplane was operated as a Title 14 *Code of Federal Regulations* Part 91 instructional flight.

AIRCRAFT INFORMATION

The wreckage recovery was delayed about 8 months. During this time the propeller, instruments from panel, and the left yoke were taken from the site and not recovered.

According to maintenance logbooks, on 08/10/20, about 4 months before the accident, the last entry in the engine logbook stated all lower spark plugs were replaced due to “rough mag drop on run up.” The airplane accumulated about 9 hours between the maintenance performed and the accident.

WRECKAGE AND IMPACT INFORMATION

The airplane came to rest inverted in swampy terrain amongst trees and sustained substantial damage to the wings and fuselage.

AIRFRAME EXAM

- During the time between the accident and recovery the instruments from the left side of the panel were removed, the control yoke and propeller were also removed and not located.
- Control cable continuity was established from all flight controls to their respective control surfaces.
- Recovery personnel drained an undetermined amount of fuel from the wing tanks.

ENGINE EXAM

- The engine’s crankshaft was rotated by hand, and internal and valvetrain continuity was established. Examination of the cylinders with a lighted borescope revealed no anomalies.
- The impulse coupling magnetos did not produce spark when turned by hand. The magnetos were removed and placed on a test bench; neither magneto produced a spark.
- The cylinders and spark plugs were contaminated with dirt and debris from the swamp.
- An undetermined amount of fuel was drained from the wings. The fuel finger screens were clean. The fuel selector moved freely.
- The carburetor was removed and partially disassembled. The plastic floats, needle valve, and accelerator pump appeared normal. There was no residual fuel in the carburetor and there was no corrosion or debris observed in the bowl.



Figure 1: View of the instrument panel. (Photo courtesy of Textron)



Figure 2: View of the airplane before examination. (Photo courtesy of Textron)



Figure 3: View of the left and right magnetos. (Photo courtesy of Textron)