



NATIONAL TRANSPORTATION SAFETY BOARD

Office of Aviation Safety

September 21, 2020

FIELD ENGINE EXAMINATION

ERA20LA320

This document contains 3 embedded photos.

(3 Pages)

1.0 EXAMINATION PARTICIPANTS:

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2.0 SUMMARY

Examination of N336C (Stinson 108-2, 1947) was conducted on September 21, 2020 at the location of the forced landing in a field near 1402 Hominy Drive, Newport, Pennsylvania. The GPS coordinates were 40.519444, -77.166667. Examination of the engine was limited due to the location, lack of hoisting equipment and aircraft position, and revealed no anomalies.

3.0 DETAILS OF THE EXAMINATION

3.1 Engine Examination

Upon visual inspection of the engine, no pre-existing anomalies that would have affected engine operation were noted. The propeller had one blade bent back significantly and the other was nearly straight. The engine cowling was crushed on the bottom from the landing. The main gear had collapsed, and as a tail wheel airplane, the cowling was laying on the ground.

The fuel had already been removed from both wing tanks prior to the exam. Fuel was drained from the gascolator and the carburetor bowl drain. The fuel was blue and free of contaminants. Air was blown through the fuel cap vent tubes to the carburetor fuel supply hose and the vents and fuel lines were found to be free of obstruction. The carburetor screen was free from obstruction. Fine metal sparkles were visible in the oil, consistent with an airplane that sat for an extended period.

When holding down the tail of the airplane, it was possible to turn the propeller about $\frac{3}{4}$ of a revolution. It turned freely but was limited by contact of the straight blade with the ground. Spark plugs were removed and appeared serviceable and undamaged. Thumb compression was obtained on two cylinders. Five of the six rocker valve covers were removed and upon turning the propeller, the valve rocker arms moved. The magneto impulse coupling could also be heard.

There were no other anomalies observed with the engine.

3.1 Engine Exam Photos



Photo 1: Cylinders 1, 3, 5 with covers removed (Photo courtesy of Federal Aviation Administration)



Photo 2: Spark Plugs (Photo courtesy of Federal Aviation Administration)



Photo 3: Bits of shiny particles in oil (Photo courtesy of Federal Aviation Administration)

Submitted by Lynn Spencer