



RECORD OF EXAMINATION

Mitchell Gallo
Aviation Accident Investigator
Central Region

NTSB Accident Number: CEN19LA229

Narrative:

Post-accident examination of the airplane revealed the tachometer at the accident site indicated 508.4 hours. The left fuel tank contained about 3 gallons of 100 low lead aviation fuel and was broken open due to impact forces. The right fuel tank contained about 10 gallons of 100 low lead aviation fuel. Both wing root fuel gauges had red ranges below approximately $\frac{1}{4}$ tank with the following marking: "NO TAKEOFF." The useable fuel capacity of the airplane, as placarded on the fuel selector valve, was 36 gallons. A fuel sample taken from the airplane center belly drain valve revealed no fuel contamination.

The cockpit throttle, mixture, and carburetor heat controls were in an approximate mid-range of travel position. The magneto switch was in the BOTH position. The fuel selector was in the OFF position. The wing flaps were extended to about half their travel. One propeller blade was straight, and the other propeller blade was bent rearwards about 30 degrees, about 12 inches from the propeller tip.

A post-accident engine run of the engine was performed using an external fuel supply plumbed through the right wing root. During engine starting, the engine started after the propeller rotated through about 3-5 blades. While the engine warmed, engine oil pressure increased to the normal operating range. At an engine speed of about 1,000 rpm, magneto selections of LEFT and RIGHT produced corresponding reductions of engine speed of about 100 rpm. Carburetor heat was selected two times and, on both occasions, produced engine speed reductions of about 75 rpm. The cockpit throttle control was advanced using a maximum setting of 1,500 rpm due to propeller damage and associated engine vibration during the engine run. The cockpit fuel selector was positioned to OFF and the engine sputtered and stopped operating in about 30-45 seconds.

The engine was started a second time, the primer was actuated, and there was no effect on engine operation. The cockpit mixture control was retarded to IDLE-CUTOFF, and the engine sputtered and began to cease operating, but regained operation when the mixture control was advanced from the IDLE-CUTOFF position. A second magneto check was performed resulting in reductions of engine speed

of about 100 rpm. The mixture control was moved to IDLE-CUTOFF, and the engine was allowed to cease operation.

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