

Synwood Electrics

Washington, D.C. 20010

1-17-23

ERA23LA093

To Whom It May Concern,

I conducted a test for the integrity and functionality of the Lycoming engine mounted on N1867H, Piper PA28-151, with Lycoming O-320-D3G, S/N 8593-39A at Anglin's Aircraft Recovery, Clayton, Delaware, at the request of NTSB Investigator Leah Read and in the presence of FAA Inspector Steven O' Rourke on February 17, 2023.

Upon removal from the South River at Liberty Marina, on December 27, 2022, I attempted drain water from all ports and openings in the engine, which had been completely submersed in water. I drained the engine main oil plug and removed the oil filter to expel the remaining water oil mixture. I prepared an oil mixture to replace the engine oil in anticipation of an engine run.

I removed the engine spark plugs and conducted a full rotational sweep through all cylinders with no obstruction and normal firing of impulse magnetos. I noted even and consistently sufficient compressions on all cylinders with appropriate intake and outflows. Although equipment was available, conditions did not permit an actual cylinder leak check. I removed cut and inspected the engine oil filter and did not observe and foreign material.

The engine electrical system was intact and functioning normally. I used a magneto test box connected to the engine Slick magneto "P" lead connections. I was able to test the Bendix ignition key switch system to the magnetos and trace proper grounding to the off position and correct operation through the "right, left and both" magneto positioning. The magneto to engine timing was in normal range and exhibited normal right to left offset. Given these results, the magnetos were not removed from the aircraft for further testing.

I collected fuel samples from the carburetor drain plug which primarily contained water and no other material contaminants. The firewall drain sump was destroyed and not sampled or tested. The engine mount and supporting nose gear were severely deformed. Conditions would not allow a test operational run.

There were no other engine abnormalities noted.

Sincerely,

John Marsh, AP/IA
Synwood Electrics

**NTSB Note: In a follow up conversation, Mr. Marsh reported that both fuel tanks were intact and half-full of fuel.*