

Mitchell Gallo
Senior Aerospace Engineer
Aviation Safety - Central Region

Date: November 15, 2023

Subject: CEN23LA182, Aircraft Examination

Contact: Gregory Thurston, Aviation Safety Inspector, Federal Aviation
Administration Minneapolis Flight Standards District Office

The previous owner and builder of the owner made the required logbook entry for completing phase 1 flight testing, therefore the aircraft was still in phase 1 testing and would have been limited to the flight test area listed in the operating limitations of the airworthiness certificate (Within 25nm of Bateman Field, Chippewa Falls, Wisconsin, excluding class C airspace). The entire accident flight occurred outside of the flight test area.

The pilot, who was also the current airplane owner, recently overhauled the engine carburetors and modified the fuel system on the accident airplane. The overhaul of the carburetors and the fuel system modification were not recorded in maintenance records. When the pilot purchased the airplane, it was equipped with an airframe ballistic parachute. He did not like airframe parachutes, so he removed it from the airplane and installed a fuel tank in its space. He calculated that the weight of the parachute was equal to the tank and 2 gallons of fuel. Prior to the accident flight, he tied the tailwheel of the airplane to an anchor point at the departure airport and ran the airplane engine at a high-power setting for approximately 28 minutes to test the fuel system modification that he made. He also adjusted the ground adjustable propeller to obtain 6,200 rpm. After the ground run, he decided to test fly the airplane. During takeoff, the engine only attained 6,100 rpm. He stated that he felt and knew something was wrong. There was another aircraft close to the airport, so he radioed the other aircraft of engine issues and asked the other aircraft for its position from the airport. The other aircraft responded that it was about 3 miles from the airport. The accident pilot told the other aircraft to go ahead and land, and he would

land behind him. As the accident airplane turned towards the runway, the engine quit, and the accident pilot was unable to attain the runway. The airplane touched down in a soft field about 250 feet from the end of runway 12. The accident pilot recovered the airplane and placed it in a hangar without the knowledge/permission from the National Transportation Safety Board (NTSB) or Federal Aviation Administration (FAA).

The airplane sustained substantial damage that included damage to the wing rib and lower spar cap at left main gear attach point.

Postaccident examination of the engine revealed the front carburetor was out of its mounting flange. A portion of the left side engine cowl, near the carburetor, was torn outward and aft due to impact forces during landing. There were no other engine anomalies noted during the examination.

The pilot stated that he thought the loss of engine power was due to fuel tank venting that was part of the modification of the fuel system that resulted in fuel starvation.