

National Transportation Safety Board

Office of Aviation Safety

Washington, DC 20594



CEN21LA213

ENGINE FIELD NOTES

October 18, 2022

A. ACCIDENT

Location: Merrill, WI
Date: May 11, 2021
Time: 15:00 Central Daylight Time
Airplane: Beech C23; N793Y

B. ENGINE FIELD NOTES

IIC	Aaron Sauer NTSB Denver, CO
Party Coordinator	Ryan Enders Lycoming Engines Williamsport, PA

C. SUMMARY

On May 11, 2021, at 1500 central daylight time, a Beech C23, N793Y, was substantially damaged when it was involved in an accident near Merrill, Wisconsin. The pilot and passenger had minor injuries. The airplane was operated [as a Title 14 Code of Federal Regulations Part 91 personal flight](#).

The pilot reported that he was returning to the airport after a 1-hour flight. When the airplane was about 5 miles from the airport, and descending through about 1,250 ft, the engine started to run rough and gradually lost power. The pilot switched fuel tanks and magnetos, with no change in the power loss. He executed an off-field landing. During the descent, the pilot turned the airplane about 45° to avoid powerlines. The left wing impacted the ground and the airplane touched down onto the field; the landing gear collapsed, and the airplane slid to a stop on its belly. The airplane exhibited substantial damage to the wings and fuselage.

Weather at the time of the accident reported scattered clouds at 7,000 ft, 10 miles of visibility, wind from 020 at 3 knots, gusting to 14 knots, temperature 55°F, and dewpoint 25°F.

The airplane was recovered to a secure location for further examination.

Airframe:

The airframe was not examined.

Engine:

Prior to this examination, the airframe and engine were examined by a FAA inspector. It was reported the inspector removed the oil filter and oil suction screen, and significant metallic debris was noted. In addition, the magentos, carburetor and top spark plugs were removed and examined with no issues reported.

Examination of the Lycoming O-360-A2G engine (serial number: L-13418-36A) revealed the fuel pump remained attached to the accessory gearbox. The pump was removed and operated normally when manually actuated. The bottom spark plugs showed normal wear signatures and plugs #3 and #4 contained metal deposits. The engine was manually rotated via the vacuum pump drive gear and mechanical continuity was noted throughout the engine. Thumb compression was noted on cylinders #2, #3, and #4. Cylinder #1 exhaust pushrod was not free to move due to rust and corrosion, most likely from being exposed to postaccident environmental conditions.

The engine was partially disassembled; cylinders #1, #2, and #4 were removed. Engine cylinder #3 and several engine crankcase thru-bolts could not be removed with available tooling due to internal engine damage. After cylinder removal, it was noted by visual observation that 7 of the 8 engine tappets were damaged/destroyed. The examination was completed at that point and further disassembly was to be coordinated at another location. Tappet material found in the engine and oil sump was retained and submitted to the NTSB investigator for materials lab examination.

Propeller:

The propeller was not available at the time of the examination.

Submitted by:

Aaron Sauer
Sr. Air Safety Investigator