



AIRFRAME AND ENGINE EXAMINATION

NTSB ACCIDENT NUMBER: ERA21FA178

AIRCRAFT REGISTRATION: N24RG

OPERATOR: Individual

ACCIDENT LOCATION: Great Valley, NY

NTSB Investigator-in-Charge

Leah D. Read, Sr. ASI

BRIEF NARRATIVE

On April 7, 2021, about 1408 eastern daylight time, a Cessna 177B airplane, N24RG, was destroyed when it was involved in an accident while taking off from the Great Valley Airport (N56), Great Valley, New York. The pilot was seriously injured, and the pilot rated passenger was fatally injured. The airplane was operated as a Title 14 *Code of Federal Regulations* Part 91 personal flight.

DETAILS OF THE INVESTIGATION

The National Transportation Safety Board traveled to the scene of the accident. The engine and airframe examination were completed on-scene.

AIRPORT INFORMATION

Great Valley Airport has an approximate 3,800 foot-long by 90-foot-wide turf runway aligned 06/24. The field elevation was 1,450 ft mean sea level (msl). A walk of the takeoff portion of the runway revealed that it was dry and free of obstructions, holes, or obstacles.

WRECKAGE AND IMPACT INFORMATION

The airplane departed runway 24 and impacted the ground in a left-wing-low, nose-down flight attitude and cartwheeled. The airplane came to rest about 2,250 ft down and about 50 ft left of the runway. The left and right wings came to rest upright. The engine, fuselage, and tail were inverted. A post-impact fire consumed the fuselage, inboard left wing, left flap, and the outboard half of the left stabilator.

All major components of the airplane were located at the accident site. Flight control continuity was established for all flight controls to the cockpit area. The only break in the flight controls was observed to the right aileron control cable. The fractured ends of the cable were frayed, consistent with overload. Examination of the flap jack screw revealed the flaps were fully retracted.

The fuel selector was not located in the wreckage, but continuity of the fuel system to the fire wall shut off valve and fuel strainer was established. The fuel strainer bowl was breached from impact and empty of fuel. The fuel strainer was absent of debris.

The engine remained attached to the airplane and the two-bladed propeller remained attached to the engine. Both blades were curled/twisted and exhibited chordwise scoring. When the engine was rotated manually via the propeller, compression and valve train continuity were established on each cylinder.

The top and bottom spark plugs were removed and all, but the No. 2 and No. 4 top plugs appeared gray in color consistent with normal wear per the Champion Check-A-Plug chart. The No.2 and No. 4 top plugs were oil soaked due to the position of the engine after impact. The dual magneto was removed and when rotated, spark was observed at each ignition lead. The carburetor remained attached to the engine, but the main inlet fuel line was impact broken due to impact. The carburetor was disassembled, and a small amount of yellowish colored fluid was observed in the bowl. Water finding paste confirmed the fluid was water. Based on the position of the engine and carburetor along with the impact broken inlet fuel fitting, water most likely entered the carburetor during postaccident fire suppression efforts.

The oil pan was intact, and the oil suction screen was absent of debris. The oil filter was removed, and the element was also absent of debris.

No mechanical deficiencies were observed with the airplane or engine that would have precluded normal operation at the time of impact.