



NATIONAL TRANSPORTATION SAFETY BOARD

Office of Aviation Safety
Western Pacific Region

July 2, 2019

ONSITE EXAMINATION NOTES

WPR19FA182

A. ACCIDENT

Location: Moab, UT
Date: June 30, 2019
Aircraft: N66DN
NTSB IIC: Albert Nixon

B. EXAMINATION PARTICIPANTS:

Albert Nixon
Senior Aviation Accident Investigator
National Transportation Safety Board
Federal Way, WA

Jon Delamarter
Customer Support Manager/AP & IA
CubCrafters
Yakima, WA

C. SUMMARY

Examination of the airplane wreckage was conducted on July 2, 2019, at the accident site at the Needles National Park, Moab, Utah. No evidence of preimpact mechanical failure or malfunction was noted during the examination of the airframe and engine.

D. DETAILS OF THE INVESTIGATION

1.0 WRECKAGE AND IMPACT INFORMATION

Examination of the accident site revealed that the red and white colored airplane impacted terrain between the top of the ridgeline to about 2 ft below it, and then fell downwards about 30 ft, to where the wreckage was located. All major components of the airplane were contained within the main wreckage site. Most of the wreckage debris, consisting of small fragments, was scattered about 15 ft from the main wreckage, however the skylight snap vent was located about 200 ft southeast of the main wreckage. The fuselage came to rest upright, on a heading of about 053° magnetic and a slope of between 30-45°. On the ridgeline top, a seal from the wing root fairing was observed embedded in vegetation and several fragments, and a composite cover of the propeller blade were observed. Additionally, an oil stain, red paint marks, and rock scars emanated from this area on the ridgeline top, through disturbed rocks on the ridgeline slope, to the area where the main fuselage came to rest. The wreckage site was located in mountainous, desert terrain, with light vegetation and numerous rocks, and an elevation about 6,000 ft. Recovery personnel had cut the upper center section of the fuselage, with the wings still attached, and then flipped the wings backwards and they came to rest on the vertical stabilizer. The wing struts were also cut by recovery personnel. There was no postimpact fire.



Figure 1: Airplane wreckage as viewed from above.



Figure 2: Airplane wreckage as viewed from the rear.



Figure 3: Top of ridgeline with oil stain visible.

The left wing sustained substantial leading-edge damage on the entire span, The left flap's inboard nose rib was still attached to the fuselage, however, the flap was separated from the nose rib. The aileron was partially attached. The aileron had separated from the inboard attach point/nose rib. The strut fork on the left forward lift strut was broken with a few threads protruding

The right wing sustained substantial leading-edge damage on the entire span, The right flap's inboard nose rib was still attached to the fuselage however, the flap was separated from the nose rib. The aileron was partially attached. The aileron had separated from the inboard attach point/nose rib. The seal for the fuel cap was observed on the ground by the wreckage. Both lower aileron control cables were separated and broom-strawed. The left near the lower fair lead and the right near the aileron cable pulley assembly.

The empennage remained attached to the fuselage and was relatively intact. Flight control continuity was unable to be established due to the impact damage and the precarious position of how the airplane was situated. The vertical stabilizer and rudder were attached to their respective attachment points. The left and right horizontal stabilizers and left elevator were attached and were relatively intact. The elevator trim was observed in about the neutral position. The right elevator was bent downwards about mid-span.

The instrument control panel and cabin area were substantially damaged. The fuel selector was observed in the both position. The ignition was in both. The airspeed indicator read "0." The circuit breaker panels were damaged, and it was unable to determine the circuit breakers position at time of impact. The primer was closed. The ELT was found intact, secured in position, and the unit power was in the off position. The front seat's left and right lap belt were observed to be torn.

The engine came to rest upright and was located to the right of the wreckage. The engine mount was attached to the engine but separated from the fuselage. The carburetor was still attached. The gascolator fuel fitting for the carburetor fuel supply line was separated at the gascolator. On the engine's right side, the rocker cover panels were attached. The carburetor air box was crushed. The starter was separated from the engine. The oil screen was observed lying in front of the engine and was buried in the dirt. The oil quantity lever indicated a minimal level of oil quantity, but the dip stick's numerical lines were saturated with oil.

The two-bladed wood propeller was mostly shattered and splintered with both blades broken away down to the spinner. The spinner and what remained of the propeller were still attached to the crankshaft flange. The propeller spinner was crushed and exhibited impact markings.

The Dynon D180 and Garmin 796 display screens were damaged, and the units were removed for shipment for potential download of data.

The site examination was completed, and the airplane wreckage remained at the site, awaiting potential future recovery.

Submitted by: Albert Nixon