



## **NATIONAL TRANSPORTATION SAFETY BOARD**

Office of Aviation Safety  
Western Pacific Region

May 1, 2019

# **ONSITE EXAMINATION NOTES**

**WPR19FA124**

Contains 3 Embedded Images

## **A. ACCIDENT**

Location: Ridgefield, WA  
Date: Apr 29, 2019  
Aircraft: N90LK  
NTSB IIC: Michael Huhn

## **B. EXAMINATION PARTICIPANTS:**

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

Keith Ruconich  
Aviation Safety Inspector  
Federal Aviation Administration  
Portland, OR

## **C. SUMMARY**

Examination of the airplane wreckage was conducted on April 30 and May 1, 2019, at the accident site near the Daybreak Airport, Ridgefield, Washington. 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 airplane impacted into shallow water about 1.5 ft deep in the Zimmerman Greenway on the East Fork of Lewis River, in Clark County, flood overflow area. The marsh was surrounded by bunches of large trees (about 75-90 ft in height) Additionally, a high-tension power line ran from the north to south, and was about located about 200 ft east of the accident site. No trees or power lines were observed to be damaged. The site was located about 1200 ft south southeast from the departure end of runway 31, at the Daybreak Airport (WA46), La Center, Washington. The elevation was about 28 ft. The water was swampy, murky, and in an area where new seedling trees have been planted for restoration of the wetland. About 23.5 acres of restoration was taking place in the area.



**Figure 1: Airplane wreckage in reference to the Daybreak Airport.**

All major components of the airplane were contained within the main wreckage site. The airplane's fuselage came to rest upright on a heading of about 090° magnetic and was positioned about 25° nose low. The empennage was totally out of the water. The wreckage was located about 30 ft from the nearest shore line. There was no postimpact fire.





Figure 2: Airplane wreckage viewed from the aft.

Visibility in the water and mud was very limited but the wings appeared to be attached to the fuselage. The empennage was attached and intact. The fuselage was bent right just aft of the cabin. Flight control continuity was unable to be established from the individual flight controls surfaces to the flight control sticks, because of impact damage to the bottom of the airplane, with the exception of the right aileron, which continuity with the cockpit controls was established. The flaps were in the retracted position.

The right wing's leading edge exhibited buckling about mid-span and impact damage. The right flap and aileron were attached. The left wing sustained leading edge damage. The flap and aileron were still attached. The left aileron was only attached by the most inboard attachment point.

The empennage was relatively intact. The vertical stabilizer and rudder were attached to their respective attachment points. The left and right horizontal stabilizer and elevator were attached and were relatively undamaged. The elevator trim tab was observed in the full [tab trailing edge] up position. Both the tail wheel and the rear position light were attached and intact.

The cabin sustained impact damage to the bottom portion. The control sticks were intact with the exception of the hand grips being separated. The left-seat shoulder strap of the three-point

harness consisted of two sections of webbing lap-stitched together end-to-end; the stitching that secured those two sections together failed in the accident, and the two sections became separated from one another.

The instrument control panel and cabin area were partially submerged in water. The ADI indicated a left bank of about 20°. The manifold pressure indicated about 33 inches. The altimeter indicated about 750 ft with 30.15 hg set. Two Garmin devices were observed in the cockpit instrument panel. One was an attitude indicator, and the other was a multi-function display (MFD).

The engine appeared to be partially attached to the fuselage but was buried in the mud. The fuselage forward of the cabin was bent right about 25°.

During recovery of the airplane, flight control continuity was again checked. Due to the level and nature of the damage, elevator and rudder continuity were unable to be established. The elevators were stuck in the [elevator TED] down position. The left aileron continuity was established to the torque tube at the wing root.

Both main landing gear were attached to the fuselage, but bent aft.

The fuel selector was in the right fuel tank position. All engine control knobs were fully in. The engine throttle continuity was established from stop to stop before the engine was cut from the fuselage by recovery personnel. The canopy was in the locked position.

The engine was covered with mud and all the engine accessories appeared to be attached. Oil was observed leaking from the oil sump. The oil quantity dipstick indicated about 4 on the scale of 1-6. The propeller remained attached. One blade was bent aft about mid-span and the other blade was relatively intact.





**Figure 3: The engine as viewed from the front after removal from the fuselage.**

A Merlin ADS-B Unit and a GARMIN unit located on the cockpit instrument dashboard were secured for potential download of data. The airplane wreckage was recovered to a secure facility for further examination.

The wings and engine were cut and removed from the fuselage by recovery personnel.

Submitted by: Albert Nixon