

National Transportation Safety Board

Office of Aviation Safety

Washington, DC 20594



WPR23FA344

WRECKAGE EXAMINATION SUMMARY REPORT

Factual Report

September 17, 2023

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A. ACCIDENT

Location: Lake Sammamish, Washington
Date: 9/15/2023
Time: 1058 Local
Airplane: Seawind 3000 (N57TJ)

B. PARTICIPANTS

NTSB-IIC	Andrew Swick NTSB AS-WPR Phoenix, Arizona
FAA-IIC	Bruce Kitelinger FAA-FSDO Seattle, Washington
Party Member	Troy Helgeson-Air Safety Investigator Lycoming Engines Denver, Colorado

C. DETAILS OF THE EXAMINATION

1.0 Accident Site

The accident site is located near the pilot's residence on the west cost of Lake Sammamish. Aerial photos from the local media shows the airplane inverted in the water and a debris field about 100 ft in diameter floating on the water. Soon after the accident, the local law enforcement gathered floating debris and towed the airplane to the Lake Sammamish State Park Boat Launch at Jensen's Cove, on the southeast side of the lake, about a 3-1/2 mile distance. The next day a salvage company was hired by the pilot's family to recover the airplane from the water to the pilot's residence. The forward fuselage structure including the canopy was missing. The right aileron separated from the airplane, was found in two sections and was found with in the floating debris. The wings and elevator and horizontal stabilizer were separated by the recovery company for transportation of the wreckage.

Divers later reported to the NTSB-IIC that there were portions of the airplane located on the lake floor near the accident site. They stated that there may be an opportunity to retrieve the remaining portions at a future time.



Figure 1. Main wreckage recovery from the water.

Two security videos captured the airplane attempting to depart to the north along the west side of the lake. The security videos were positioned along the west side of the lake pointing to the east. The airplane appears to have porpoised during takeoff, impacting the water twice before colliding with the water in a big splash. The videos also captured engine rpm.

During the recovery process, fuel was drained from the left inboard wing fuel tank near the leading edge. Both of the left wing tanks had an undetermined amount of fuel and water. The leading edge of the left wing had delamination damage and an area of blue fuel staining. The inboard right wing tank was full and the right outboard wing tank was about 2/3 full of a blue colored fuel. The fuel tank caps were removed and were unremarkable. Fuel was identified throughout the airplane fuel system.

The elevator had buckling damage near the right tip.

The forward fuselage, nose landing gear and portions of the cabin area including the canopy, a majority of the lower canopy mating surface were not recovered with the wreckage. The rudder pedals, control stick linkage and engine controls had impact damage and remained attached to the main wreckage. The instrument panel and center console had impact damage. Switches, knobs and circuit breakers had impact damage and reliable switch positions prior to the accident

sequence were not determined. The fuel selector was found in the "Left" tank position. The landing gear was found retracted and the landing gear handle was found in the "UP" position. The throttle, propeller and mixture handles were all found full forward. Engine control cable continuity was obtained, and the handles moved freely by hand.

Before the wings were defueled and removed, aileron control cable continuity was established from the control stick linkage to the right aileron and left aileron control linkage. The fuselage support structure for the rudder pedals separated from the main wreckage. The rudder cable continuity was established from the cables located near the rudder pedals to the rudder. Control cable continuity was established from the control stick linkage to the elevator. The flaps were found in the up position and remained attached to its torque tube connections. The flaps handle was found in the "Down" position.



Figure 2. Recovery process.

The canopy left hinge support separated from the canopy and was found imbedded in the fuselage. The right canopy hinge support remained attached to a portion of the canopy. Scuff marks were found on the fuselage between the hinge supports.



Figure 3. Canopy hinges.

The forward seat lap belts remained attached to the airframe structure and were unlatched and undamaged. The right forward seat shoulder harness was undamaged and remained attached to the right section of the canopy ceiling panel with a castellated nut and bolt. The inertia reel spring separated from the inertia reel and was found unwound underneath the pilot's seat. The inertia reel was damaged and pulled to the left side. The left forward shoulder harness inertia reel and webbing were not found during the examination. The shoulder harness canopy mounting bolt remained attached to the left section of the canopy ceiling. The bolt threads near the tip on its forward-facing side were damaged and had embedded green colored material. Circular wear marks were identified on the ceiling panel near the bolt.



Figure 4. Canopy ceiling portions and shoulder harness.

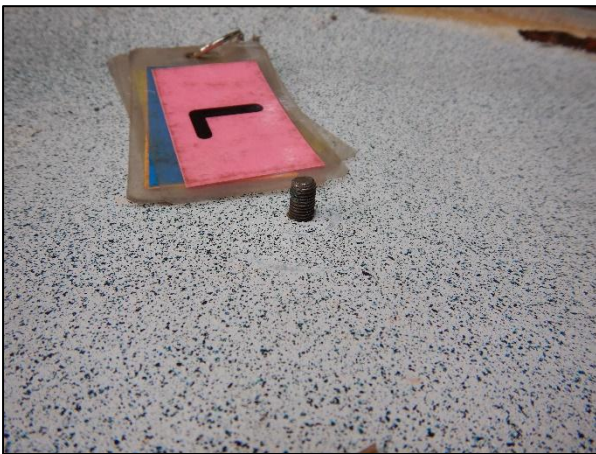


Figure 5. Left forward seat shoulder harness canopy mounting bolt.



Figure 6. Right forward seat shoulder harness inertia reel.

The canopy left latch pocket remained attached and was undamaged. The right canopy latch and receiver were not found during the examination. Both of the forward canopy side-locking mechanisms or the receiving ends were not found during the examination.



Figure 7. Left canopy latch receiver location.

The forward section of the hull was not found during the examination. The forward section of the recovered hull had delamination damage on the hull stem and strakes forward ends. The attached portions of the spray rail were damaged during the recovery process. The several spray rail portions were found in the debris.



Figure 8. Airplane hull aft view.



Figure 9. Airplane hull side view.



Figure 10. Airplane hull left side view.

2.0 Engine Examination

The spark plugs were removed from the Lycoming AEIO-540-L1B5 supercharged (serial number L-25114-48) engine. The automotive spark plug electrode areas had light amounts of combustion residue. The electrodes showed a normal wear condition. The cylinder rocker covers were removed, and the cylinder valve train components were lubricated and undamaged. The single TCM magneto was removed and had water in its housing. The water was removed and spark was obtained from the unit. The electronic ignition and automotive spark plug ignition leads were undamaged. The induction air inlet did not have a filter screen. Engine control linkage moved from stop to stop. The oil was drained and the oil pickup screen was clear of debris. The oil filter was removed and disassembled. No metal particles were identified. The crankshaft was rotated freely by hand and engine gear and valve train continuity was obtained. Compression was felt at all cylinders. The cylinders were examined with a lighted boroscope and no anomalies were noted.

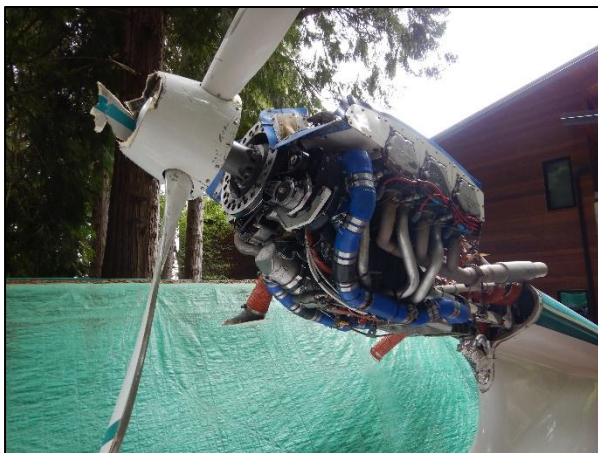


Figure 11. Lower left view of the engine and propeller.



Figure 12. Upper left view of the engine.



Figure 13. Lower right view of the engine.

3.0 Propeller Examination

The propeller remained attached to the engine crankshaft flange. The spinner tip was missing, and painted fiberglass material was found wedged in the remaining attached spinner. It was later determined that the painted fiberglass section was from the forward fuselage. One blade was loose in the hub and was missing about 3 inches of the tip. The blade had multidirectional scoring on both sides of the blade. Another blade had delaminated near the tip and had nicks and scoring on both sides of the blade. The last blade had the least amount of nicks and scoring on both side of the blade.



Figure 14. Engine and propeller assembly.

Submitted by:

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