



NATIONAL TRANSPORTATION SAFETY BOARD

Office of Aviation Safety
Western Pacific Region

March 12, 2019

WRECKAGE EXAMINATION SUMMARY

WPR19LA055

This document contains 0 embedded photos.

A. ACCIDENT

Location: Townsend, Montana
Date: January 2, 2019
Aircraft: N4934A, Cessna 180

On January 2, 2019, about 1650 Mountain standard time, a Cessna 180, airplane, N4934A, impacted powerlines and terrain while maneuvering at low altitude near the Missouri River about 2 miles south of Townsend, Montana. The pilot and passenger were seriously injured, and the airplane was substantially damaged. The airplane was registered to a Kestrel Leasing, LLC, and operated by the pilot under the provisions of 14 *Code of Federal Regulations (CFR)* Part 91 as a personal flight. Visual meteorological conditions prevailed and no flight plan was filed for the local flight that originated from Townsend Airport (8U8), Townsend, Montana at about 1535.

There were multiple witnesses who saw and/or heard the airplane flying at low altitude before the accident. One witness reported that the airplane was flying at a low-level in a westerly direction over the holding ponds located about 2 1/2 miles west of 8U8, then make a sharp left turn over the river. The witness estimated that the airplane was about 15-20 ft above the river's water level. The airplane was so low that he lost sight of it as it was lower than the river bank. He further stated that although the airplane was low, it appeared to be in control with no smoke and no indication that he was in any trouble. Other witnesses, a pilot and his wife, heard the airplane's engine "straining" and saw the airplane flying at the airport [8U8] in a nose up, high angle of attack. The airplane was flying north and appeared to level off at about 200 to 300 ft above ground level (agl). This witness's wife also stated that she heard the pitch sound of the engine change, and that it sounded different than other airplanes.

According to local law enforcement, initial reports state that powerlines crossing the river were broken and that an airplane had crashed. About a 1/4 mile northwest of the accident site, a set of wires span across the river in a southwest to northeast direction. The utility company that supplies electricity to the area, stated that an electrical outage was reported about 1650.

First responder photos show the airplane at the accident site in a grassy snow-covered field near a barbed wire fence. A broken tree limb and ground scars indicated that the airplane was flying eastward over the river before impacting a tree and the ground. The airplane came to rest upright and the landing gear separated. The wings are buckled and partially separated near the fuselage. The forward fuselage and cabin area were crushed and distorted. The rear fuselage was buckled near the empennage. The empennage was missing the rudder and about 12 inches of the upper vertical stabilizer.

Astronomical data obtained from the United States Naval Observatory for the accident site on the day of the accident indicated that sunset was at 1651, the end of civil twilight was at 1726, and moonset was at 1442.

B. PARTICIPANTS

Andrew Swick-NTSB IIC

Troy McClanahan-FAA IIC
Pete Basile-Textron Aviation
Kurt Gibson-Continental Motors Group

C. SUMMARY

A postaccident examination was conducted at the facilities of Arlin's Aircraft Services, Belgrade, Montana. The examination of the airframe and engine revealed no evidence of preaccident mechanical malfunctions or anomalies that would have precluded normal operation. Several impact marks were found on the rudder that were consistent with a cable strike and the vertical stabilizer showed cable strikes and electrical arcing.

D. DETAILS OF THE INVESTIGATION

1.0 Engine

The engine remained attached to the firewall and the propeller assembly remained attached to the engine. The rudder pedals and instrument panel were separated from the fuselage and remained attached to the engine and firewall. One blade separated from the propeller assembly and was found with the main wreckage. All four engine mount legs were broken. The induction inlet airbox was crushed and the carburetor remained attached. The exhaust assembly had impact damage. The oil sump was crushed, and the oil drain port was damaged. Oil was indicated on the oil gauge; the oil was clear. The upper spark plugs and cylinder rocker covers were removed. The spark plug showed normal-worn out wear conditions when compared to an AV-27 chart. The spark plug electrode areas had normal combustion deposits. Engine control cables were bent and twisted in the firewall area. Engine control cable continuity was attained from the throttle knob to the carburetor throttle lever. The carburetor was removed from the engine and disassembled. The carburetor internal components were undamaged and fuel staining in the throttle cavity was noted. The inlet screen was removed and was free of debris. The crankshaft was rotated by hand and spark was produced from each ignition lead. Cylinder thumb compression and valve train continuity was attained. The cylinders were boroscoped and the examination revealed normal operating conditions. The oil filter remained attached to the oil filter adapter. The oil filter was removed and the housing was cut open to inspect the filter; there was no metallic material noted within the filter pleats.

2.0 Airframe

The wings were separated from the fuselage and cut down the cabin roof for separation, during the recovery of the wreckage from the site. The vertical stabilizer and rudder separated sections were found and collected with the main wreckage.

Right Wing

The right wing and cabin roof remained attached. The aileron and flap remained attached. The outboard aileron was bent downward and aft. The wing tip was bent upwards. Flight control continuity was attained. Flap position unknown. The fuel tank was intact and the fuel cap was undamaged. No residual fuel was noted in the tank.

Left Wing

The left wing remained intact with impact damage on the leading edge outboard section. About 4 ft and 3 in of the leading edge skin separated. The wing was buckled throughout. The fuel tank was intact and the fuel cap was undamaged. Residual fuel was noted in the tank.

Empennage

The separated rudder and vertical stabilizer sections showed evidence of two separate wire strikes. One wire strike traveled through the vertical stabilizer and the other traveled about 2 inches through the stabilizer and arcing was visible. Cable control continuity was obtained to the elevators and rudder attachments. The cabin floor was buckled upwards from the aft door posts.

Fuel System

The fuel selector valve was found near the 'right' position. The fuel selector shaft fractured at the valve in the approximately 2-O'clock position. Air was blown through the valve and fuel sprayed from the right tank fuel line. The fuel strainer remained attached to the firewall and was drained and disassembled. The fuel collected was clear, blue in color. Light amounts of dirt and debris and one drop of water was detected.

The heat exchanger was disassembled and showed no signs of a thermal leak.

Submitted by: Andrew Swick