



NATIONAL TRANSPORTATION SAFETY BOARD

Office of Aviation Safety

Central Region

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FIELD NOTES

CEN18FA037

This document contains XX embedded photos.

(2 Pages)

1.0 PARTICIPANTS:

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2.0 SUMMARY

On November 22, 2017, about 1700 eastern standard time, a Cessna 172G, N4676L, was destroyed when it impacted trees and terrain near Pittsford, Vermont. The pilot was fatally injured. The aircraft was registered to Anne Kristine II, Inc., and operated by the pilot under the provisions of 14 *Code of Federal Regulations* Part 91 as a personal flight. Weather conditions at the site are to be determined. The flight was not on a flight plan. The flight originated from the Pittsfield Municipal Airport (PSF), Pittsfield, Massachusetts at an unconfirmed time and the Middlebury State Airport (6B0), Middlebury, Vermont, was the intended destination.

The following is from the FAA notification: 1 FATAL WHEN VFR N4676L, CESSNA C172, CRASHED IN WOODED AREA UNDER UNKN CIRCUMSTANCES VCNTY PITTSFORD, VT 231302E. POB 1: Damage: unkn: Wx: not reported. No ATC services provided. (E-ROC 11/23 Franco)

Examination of the airframe and engine was conducted on November 26-27, 2017, on-scene and at the facilities of AMF Aviation, LLC in Southwick, MA. No evidence of preimpact mechanical malfunction was noted during the examination of the recovered airframe and engine.

3.0 DETAILS OF THE INVESTIGATION



The airplane impacted trees and terrain and came to rest at coordinates 43-45.341N, 73-2.402W. The initial impact point was a tree at location 43-45.33N, 73-2.424W. The engine was found at location 43-45.354N, 73-2.394W and it and the battery were the farthest pieces from the main wreckage. The airframe was severely fragmented and came to rest at the base of a large tree. A tree limb about 4 inches in diameter was found that had a clean propeller slash completely through the limb.



The fuselage was crushed rearward to the cabin area. The aft fuselage was intact but bent to the left. The tail surfaces were separated from the fuselage. Portions of the top, middle and bottom of the vertical stabilizer were found near the main wreckage. The bottom rib of the rudder, including the control bellcrank remained attached to the rudder cables. The cables were continuous to the cabin area. The left cable was broken and the break was consistent with overload failure. The right rudder cable was cut near the firewall to facilitate transportation. The main landing gear was still attached to the fuselage. The engine, and nose landing gear had separated from the fuselage. The forward fuselage including the firewall was cut from the aft fuselage to facilitate transportation.



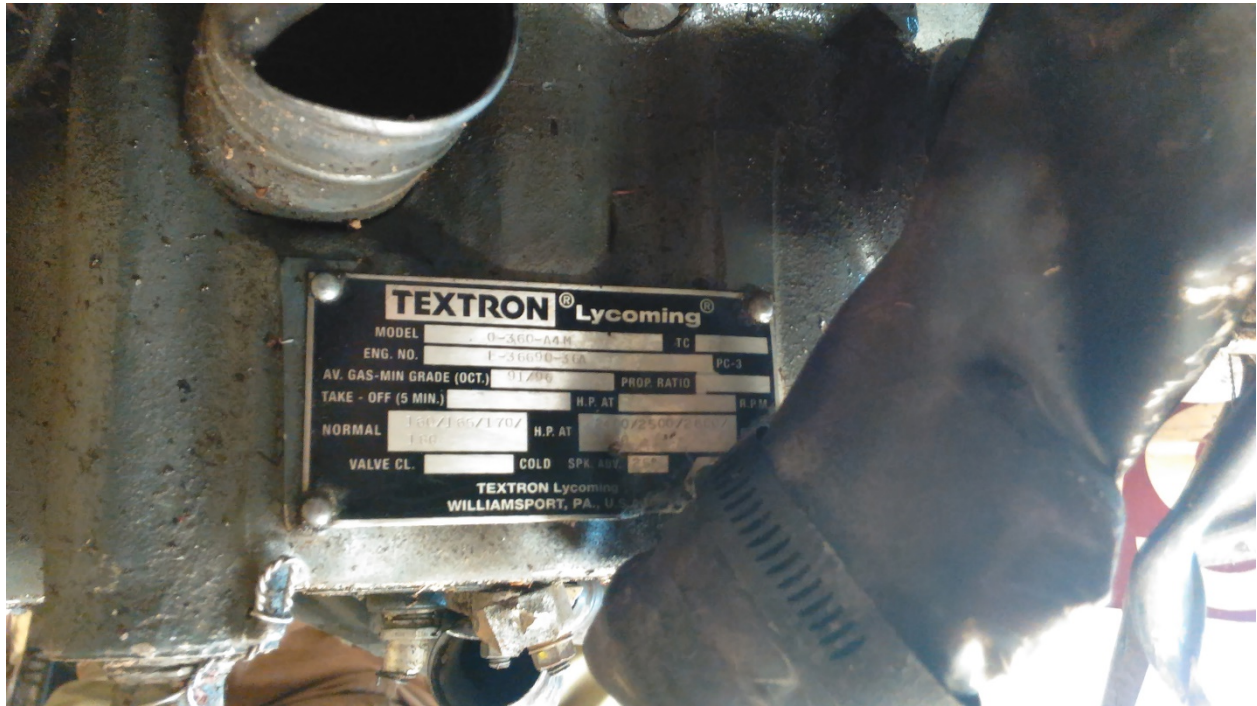
The horizontal stabilizer was found adjacent to the aft fuselage with both elevators still attached. The right tip of the horizontal stabilizer and the right elevator balance weight were separated. The elevator control cables remained attached to the elevator bellcrank, but had breaks that would have been located within the fuselage structure. The breaks were consistent with overload failure.



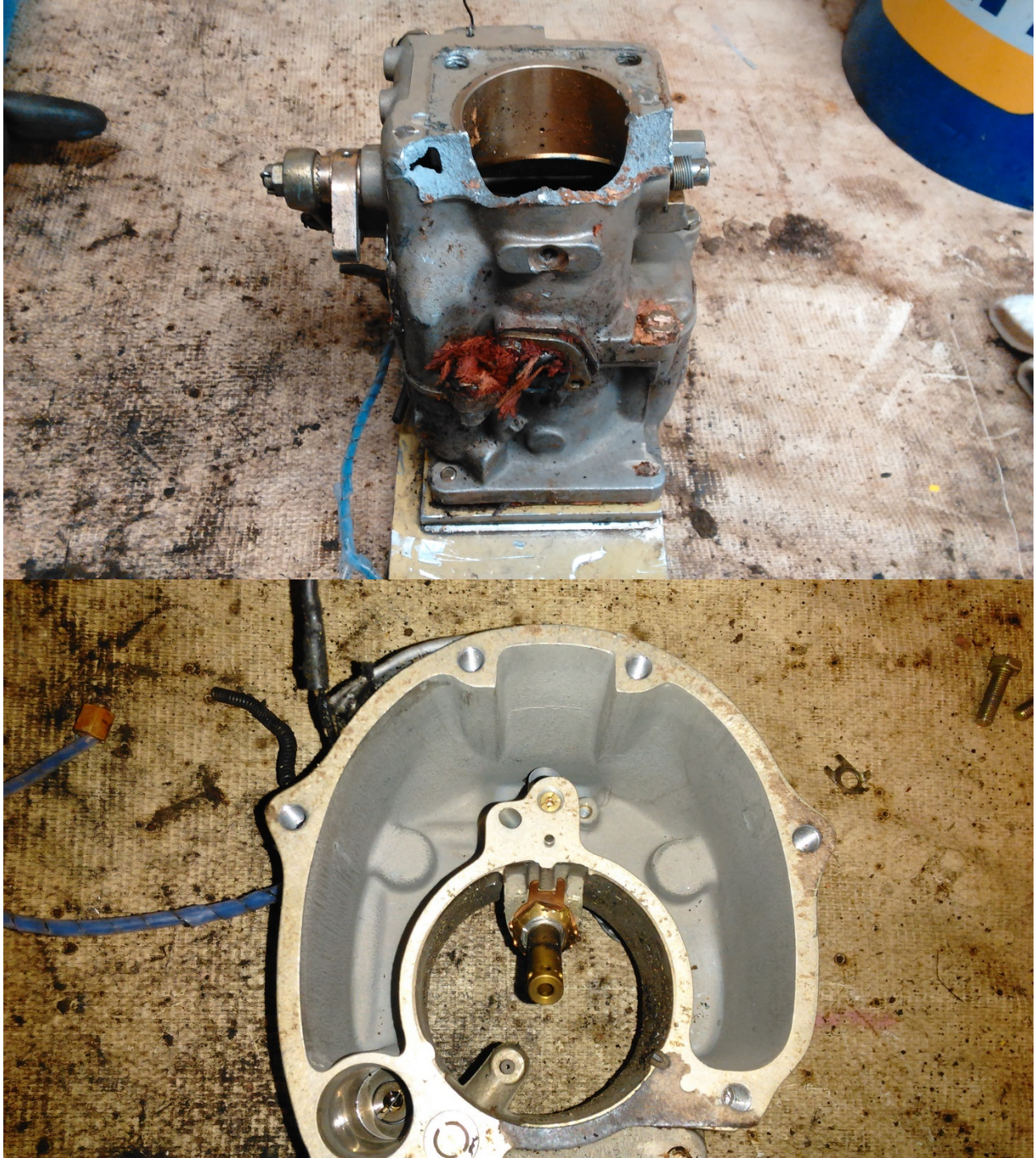


The wings were separated from the fuselage. About 5 feet of the outboard left wing was separated from the remainder of the left wing. The right wing tip fairing was separated from the right wing. Both fuel tanks were breached and both wings had impact damage and crushing. The

right aileron was still attached and left aileron was separated. The left and right aileron control cables were continuous from the bellcrank near the surfaces to the wing root.



The airplane's engine had separated from the fuselage. The carburetor was separated from the engine. It was found that although the airplane was originally equipped with a Continental O-300D engine, the engine installed at the time of the accident was a Lycoming O-360-A4M, serial number L-36690-36A. The propeller had separated from the engine. The lower spark plugs were removed from the engine and indicated normal-worn appearance when compared to a Champion Aviation Check-a-plug chart. The crankshaft could be rotated and thumb compression was verified on all cylinders. Valve action was verified on all cylinders when the crankshaft was rotated. The left magneto remained attached to the engine and produced spark on 3 leads during engine rotation. The 4th spark plug wire was impact damaged near the distributor cap. The cap was removed and one of the other leads was used to verify spark from the remaining distributor tower. The impulse coupling of the left magneto could be heard to click during rotation of the engine. The right magneto was separated from the engine and did not have an impulse coupling. All 4 ignition wires were pulled from the distributor cap. The left cap and leads were used as a surrogate to verify spark from all 4 distributor lead locations. The magneto shaft was rotated using an electric drill and spark was produced on all lead locations.



The engine carburetor was separated from the engine and the mounting flange broken. The throttle arm could be rotated freely and the throttle plate was intact. The mixture control arm was separated from the shaft and the shaft was bent. The carburetor bowl was removed and the float operated freely. The floats were of a blue plastic material. The float needle operated normally when the float was moved. The interior of the float bowl was clean and free of any debris. The carburetor fuel inlet screen was removed and the screen was clean.



The propeller had separated from the engine. The propeller was intact from tip to tip with bending to both blades. There was a chordwise scratch on the rear face of one blade.

Additional: The fuel system gascolator was examined and the fuel screen was clean and the bowl free of debris. The fuel selector shaft was found in a position between the left and off positions. The selector handle was separated from the actuator shaft and the shaft was bent.

The airplane's mechanical vacuum pump was separated from the mounting pad on the rear of the engine. An electric powered artificial horizon was found as well as the face and external case of another artificial horizon. The internal components of the second artificial horizon were not located. The first artificial horizon was disassembled. The gyroscope housing had one of the bearing mounting areas fractured. Examination of the rotating core of the gyroscope and its cage showed evidence of circumferential scoring on both components.





A vacuum operated directional gyroscope was found and disassembled. The bearing mounts and the rotating core of the gyroscope were intact and did not show any evidence of the core having contacted the housing during the mishap.





A gyroscopic turn and bank indicator was found and was partially disassembled. Upon removal of the outer case it was evident that the rotating gyroscope was intact and still turned freely on its bearings. No further disassembly was performed.





Submitted by: John M. Brannen II