

National Transportation Safety Board

Office of Aviation Safety

Washington, DC 20594



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AIRFRAME AND ENGINE EXAMINATION REPORT

March 15, 2022

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A. ACCIDENT

Location: St. Augustine, Florida
Date: March 2, 2022
Time: 17:02 (local)
Airplane: Extra 300NG

B. AIRFRAME AND ENGINE EXAMINATION REPORT

Investigator	Daniel Boggs NTSB Ashburn, Virginia
FAA Inspector	Cheryl King FAA Orlando, Florida
Air Safety Investigator	Mike Childers Lycoming Engines Williamsport, Pennsylvania

C. SUMMARY

On March 2, 2022, at 1702 eastern standard time, an Extra NG, N100NG, was substantially damaged when it was involved in an accident near St. Augustine, Florida. The private pilot was fatally injured. The airplane was operated by the pilot as a Title 14 *Code of Federal Regulations* Part 91 personal flight.

D. DETAILS OF THE EXAMINATION

1.0 Accident Site

The airplane overflew the SGJ 8,000 ft runway and came to rest inverted in marshland about 1,500 ft past the departure end of the landing runway.

2.0 Airframe Examination

The airplane was brought to the seaplane ramp at the airport and an initial examination was performed. Flight control continuity was established to all flight controls by movement of the joystick. About 3 to 4 gallons of aviation 100LL fuel was drained from the center tank. About 4 to 5 gallons of fuel was drained from each wing fuel tank. Two of the three propeller composite blades were fractured off at the hub.

The ignition key was in the BOTH position, the fuel selector was locked into the center position.

The SMOKE ARM and SMOKE REFIL switches in the cockpit were both OFF.

3.0 Engine Examination

The engine was further examined at the recovery facility. Both magnetos were removed and spun by an electric drill, spark was observed on all leads. The propeller was rotated by hand and engine continuity was established to the rear accessory case. Thumb compression was established on all cylinders. The No. 4 cylinder had low compression and suction, debris was present on the valve seat. A lighted borescope was used to examine all cylinders, valves, and pistons. No anomalies were noted.

The propeller governor knob was moved back and forth and moved smoothly. However; it was noted that when the propeller knob was pushed full forward, the propeller governor actuator arm would not move full forward to the lever stop. It was measured to be about 3/8 to 1/2" off the stop. The propeller governor cable had several inches of flex when moved to the full forward position. This would not allow the propeller to be in the high rpm low blade angle position. The entire length of the cable from the aft cockpit to the governor was visible and was not observed to be clamped to the airframe structure at any position along its length. The propeller governor was then removed and rotated by hand. Oil was observed to be flowing properly through the governor. Further examination and a bench test of the governor revealed that all parameters were within tolerances and no anomalies were noted.

The mechanical fuel pump was removed and rotated by hand. Suction and pressure was felt at the hose connections. A 12v source was applied to the electric fuel pump and the pump rotated normally. The throttle body fuel filter was removed and was clean and clear of debris. The diaphragm of the throttle body was clear and clean of debris with no tears. The fuel injector nozzles were secure and free of debris. The fuel flow divider was disassembled and water was observed. The fuel inlet screen was free of debris.

The starter and alternator remained attached to the engine and undamaged. The oil suction screen and oil pressure screens were removed and free of debris.



Figure 1 Top view of the engine after recovery.

4.0 Governor Testing

The propeller governor was removed and sent to MT-Propeller in Deland, Florida for testing. The propeller governor was placed on a test bench, and operated normally with no anomalies noted.

Submitted by:

Dan Boggs
Air Safety Investigator