

Robert Gretz
Senior Air Safety Investigator
Eastern Region Aviation

Date: 4/16/23

Subject: ERA23FA194

Contact: James Bentley, Seattle, WA

Mr. Bentley was interviewed via telephone. He stated that he is the current owner of the accident airplane. The airplane suffered a landing accident in 2004, and the salvage was purchased by Wentworth Aviation, who retained the engine and avionics, then sold the airframe "shell" to a fourth owner (Jim Miller), who sold it to Mr. Bentley. Mr. Miller added a new engine with turbocharger (54 hours since overhaul in 2012) and new avionics. A condition inspection was completed by an A&P on March 31, 2023, and an FAA DAR completed an inspection on April 1, 2023, which lasted several hours.

Mr. Bentley is a private pilot with about 90 hours of flight experience; of which, about 10 hours are in the make and model airplane. Since he had little experience, he hired the accident pilot to fly the first flight since modification/DAR approval. The accident pilot also inspected the airplane for about 1.5 hours prior to the accident takeoff. Mr. Bentley added that he saw the airplane take off, but lost sight of it behind buildings.

Mr. Bentley further stated that the engine was equipped with a fixed-pitch cruise propeller and a turbocharger. With the turbocharger engaged, the engine would obtain 2,300 rpm; however, with the turbocharger bypassed, the engine would only obtain about 2,050 rpm. At that lower rpm, the airplane would not be able to fly with one pilot and full fuel, which it had for the accident takeoff. The turbocharger was engaged or bypassed via a switch in the cockpit. Also, there was a knob to pull for alternate air valve in case the turbocharger seized.

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Date: 5/2/23

Subject: ERA23FA194 - Turbocharger Exam (via MS Teams)

Contact: Chris Ferraraccio, AMF Aviation, Springfield TN
James Childers, Lycoming Engines

Mr. Ferraraccio provided video coverage of the turbocharger examination. The turbocharger exhibited thermal damage and the turbine would not initially rotate. Mr. Ferraraccio applied WD-40 lubricant to the turbine side and compressor side, and let the unit sit for several minutes. The turbine and its shaft then rotated freely by hand; however, the compressor was melted and did not turn along with the shaft. The compressor side was disassembled for further examination. No scoring was noted on the compressor housing and all compressor wheel blades were intact. The compressor nut was found about 2 threads loose. The internal housing of the compressor wheel and its corresponding position on the shaft were examined and no rotational scoring was noted.

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Date: 5/4/23

Subject: ERA23FA194

Contact: James Bentley, Seattle, WA

Mr. Bentley was interviewed via telephone. I advised Mr. Bentley that there is an 11/1/16 engine logbook entry indicating that the accident engine came from a twin Piper (N2100P at 51.0 hours SMOH) and not a Mooney M20F; however, the first page of the airframe logbook states that the engine came from a Mooney M20F. Mr. Bentley stated that the previous engine came from a Mooney and was installed in December 1996. The accident engine came from the twin Piper.

I asked Mr. Bentley about the turbocharger. He stated that when he purchased the accident airplane in 2021, the turbocharger was already installed. He further stated that sometime between 2016-2021, the previous owner (Jim Miller) purchased a rebuilt/overhauled aviation turbocharger from RAJAY Turbo Products, Spring Branch, TX. Mr. Bentley believes that Mr. Miller installed the turbocharger himself; however, he had an automotive shop bend the exhaust tubes for him to align with the turbocharger.