National Transportation Safety Board
Office of Aviation Safety
Washington, DC 20594

CEN23LA107

FUEL FLOW TRANSDUCER EXAMINATION

March 20, 2024

A. ACCIDENT

Location: Lakeway, Texas
Date: February 12, 2023
Time: 0958 Local Time
Airplane: N304MA – Mooney Aircraft Corp. M20

B. FUEL FLOW TRANSDUCER EXAMINATION

Joshua Cawthra
National Transportation Safety Board
Federal Way, Washington

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Mukilteo, Washington

C. DETAILS OF THE EXAMINATION

1.0 Fuel Flow Transducer

The fuel flow transducer was removed from packaging as received. The unit appeared to be intact, with the wiring harness connector intact. Additionally, two fittings remained installed in the inlet and outlet ports of the unit. The connector was cut from the harness and the ends of all 3 wires were stripped to allow attachment of electrical leads. Electrical continuity was established throughout the fuel flow transducer. Air pressure was applied to the inlet port, with respective rotation of the internal wheel was noted.

Removal of the fittings was required to facilitate functional testing of the fuel flow transducer. One fitting was removed, however, during removal of the other fitting, excessive force was needed. Penetrate oil was applied to the fitting, and it was moved clockwise and counterclockwise multiple times. When a second attempt to remove the fitting was made, while rotating it in a counterclockwise direction, the housing of the fuel flow transducer fractured. Due to the fractured housing, functional and leak testing of the unit was unable to be performed. Portions of the threaded area of the housing was observed within the threaded area of the fitting.

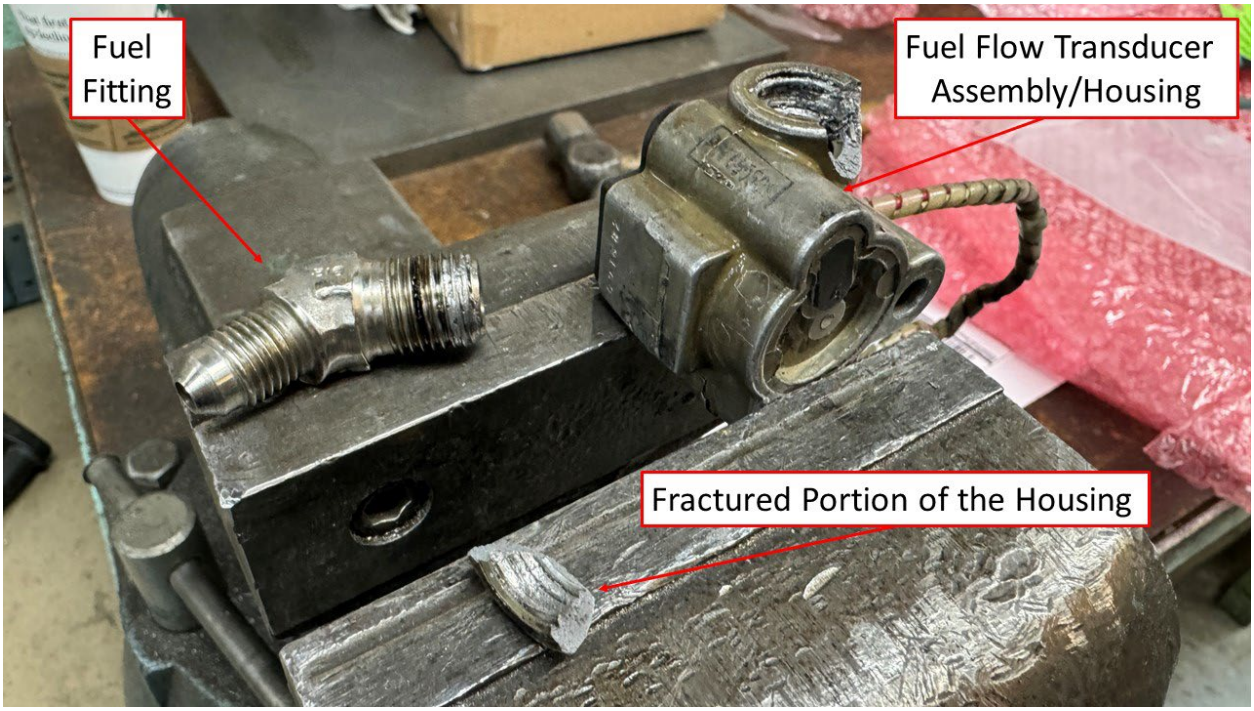

Figure 1: View of the fuel flow transducer, one fitting, and fractured portion of the housing.

Submitted by:

Joshua Cawthra
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