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Date: December 14, 2022
Subject: CEN20LA287, N8503E
Contact: Pratt & Whitney Canada (P&WC)

On December 14, 2022, an examination of engine components from N8503E was conducted at P&WC facilities under the auspice of the Transportation Safety Board of Canada.

Examination of the fuel control unit (s/n 11518193) found slight deviations to the component maintenance manual (CMM) specifications which are normal and allowed to be adjusted in the field during engine installation. Once the FCU was recalibrated to factory specifications all component maintenance manual values were obtained.

Examination of the fuel pump (s/n 008491) found it to operate below the CMM requirements, however due to safety factors, the output provided by the fuel pump at the low setting was 78.5 pounds per hour (PPH) higher than the FCU's low-speed maximum limit requirements and 910 PPH above the FCU's maximum output fuel flow. Disassembly of the fuel pump did find signatures of wear on the gear set and bushing.

Examination of the oil to fuel heater (s/n 9511) found no leakage from the oil to the fuel passage, but the thermal element actuator travel was below the CMM minimum requirements.

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