



## **Memorandum of Record**

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**Date: 04/21/2022**  
**Subject: CEN21L078, Throttle Body Injector Examination**

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The NTSB conducted an examination of a Rotech throttle body injector unit (TBI), serial number 2T0820001. The unit was received from the Australian Transport Safety Bureau following an unsuccessful attempt to have the manufacturer conduct an examination of the unit. The unit had been in a state of storage for about 13 months at the time of the examination. No alternative facilities with bench testing capabilities were located, so no bench testing was conducted on the unit prior to examination.

Following unboxing, an aluminum spacer plate was removed from the TBI to aid in the investigation. The unit displayed no evidence of impact damage. The throttle slide was first observed approximately 1/3 open and was initially stuck in that position. The throttle slide subsequently moved after pressure was applied to the throttle control arm. The throttle slide moved with resistance between the idle and open throttle position and smudges of a dark and sticky material were present on the intake face of the throttle slide. A gap of about 1/8 inch was visible with the throttle slide in the idle position. The throttle slide moved approximately 1 11/16 inches from idle to the full open position.

The fuel metering/spray tube and metering holes were visible with the throttle in the full open position. All metering holes appeared open and clear of obstructions. The spray tube rotated freely about 90 degrees. The idle fuel jet adjustment screw indicator was positioned near the 10 o'clock position. The "last chance" fuel screen was secured in place and a cap had been placed on the inlet fuel port in preparation for shipping/storage. The fuel screen was removed from the TBI and found to be mostly clear of contaminants and no holes or obstructions were noted in the screen. The inside of the filter screen did contain some small, black particulate matter.

The TBI was equipped with a primer button. The primer moved freely when depressed and returned to position by spring pressure when the primer was released. The endplate containing the primer button was removed to expose a fabric diaphragm. The diaphragm was removed and

found to be intact and no holes or defects were noted. The metal plate retaining the primer plunger was removed and no anomalies were noted.

No anomalies were noted during the physical examination of the unit that would have precluded normal operations. Operational and functional testing of the unit could not be completed due to a lack of access to appropriate testing equipment.