

From: [Brian Fuchs](#)
To: [Michael Hodges](#)
Subject: Materials Lab Email Factual (CEN24LA102)
Date: Wednesday, October 2, 2024 11:30:29
Attachments: [CEN24LA102 Images and Radiographs.zip](#)

Hello Mike,

Below is the email factual for CEN24LA102. I have attached associated images and radiographs to this email. Please let me know if you have any questions.

A fuel selector switch (designed by Textron Aviation) for a Cessna 172 (N8805Z) was submitted for inspection. The switch was submitted in two pieces; the larger piece consisted of the valve body, and connecting arm, and the other piece was a selector handle. The valve was in the "Off" position when it arrived at the lab. The valve body showed few signs of damage other than superficial scratches. When shaken, a metallic rattling could be heard.

The valve body was subjected to X-ray imaging to view the internal components with the valve in the "Off" position. Radiographs showed that the locations and shapes of the cam, balls, springs, bearing, and positioning assembly were consistent with a Cessna illustrated parts catalog and a drawing supplied by Textron. A gap was noted between the large and small balls on both sides of the cam while the valve was in the "Off" position.

The party member from Textron confirmed that the observed gap between the balls was consistent with the intended design of the fuel switch. Turning the switch to the "Right" or "Left" positions reduced the amount of rattling heard when shaking the valve. Upon turning the switch to the "Both" position, the rattling noise was no longer heard when the valve was shaken. The Textron party member confirmed that this behavior was consistent with a similar exemplar fuel selector switch.

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