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TEXTRON AVIATION

In reply, refer to: 17-2635

☐Action

02 October 2017

☒Info Only

Australian Transport Safety Bureau
62 Northbourne Ave.
Canberra ACT 2601
Australia

Attention: Mr. Greg Hood, Chief Commissioner ATSB

Subject: Advance release of transport safety report and safety recommendation

Reference: AO-2015-114-SR-002

Dear Mr. Hood,

The purpose of this letter is to provide a response to the ATSB regarding Textron Aviation's review of Safety Recommendation AO-2015-114-SR-002.

Safety Recommendation AO-2015-114-SR-002:
The Australian Transport Safety Bureau recommends that Textron Aviation (Cessna) take safety action to address the fact that Citation aircraft do not have an annunciator light to show that the parking brake is engaged and the Cessna 'before take-off' checklist does not include a check to ensure the parking brake is disengaged.

Investigation Findings and Corrective Action:
Textron Aviation has reviewed Safety Recommendation A0-2015-114-SR-002 provided by the ATSB. We have reviewed the information and disagree with the ATSB position that the absence of an annunciator and/or the lack of specific checklist call out requiring a pre-takeoff parking brake check creates a safety issue. Textron Aviation - Flight Test has reviewed the assumptions and analysis provided by the ATSB and consider the ATSB conclusions a potentially plausible explanation for the event, however, there has been no specific testing relating to the partial application of brake pressure on takeoff performance. There has been a consistent philosophy applied in the checklist procedures, concerning use of the parking brake. It is assumed that once the parking brake has been disengaged to initiate taxi, that it remains disengaged. Should the pilot need to apply the parking brake due to a lengthy hold while taxiing to the departure runway or prior to takeoff, it is considered simple airmanship to remember to disengage it once cleared to continue taxiing or takeoff. From a training standpoint, pilots are typically instructed as a matter of "good practice" to apply full brake pressure when setting the parking brake. With full pressure applied, it will become obvious to the crew that the parking brake is set when they attempt to move the airplane. Textron Aviation reviewed AFM's from other aircraft manufactures and It appears that this general philosophy has been common throughout the industry.

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This series of aircraft were certified under Part 25 requirements and meets the requirements as established. These requirements did not require annunciation of the parking brake system. While the report does identify that, there have been other incidents of this nature involving the parking brake in Citation airplanes (part23/25), they are a very small number in relation to the 1.5 million flight hours (Average Flight Hour: 4531.72 (12/16)) that have been conducted in the 331 operating 550 Bravo's. The incidents identified in the report are similar in that partial brake pressure was believed to be a contributing factor, however, the outcomes have been inconsistent. The fundamental design of the parking brake is common across all Citation models, though some do place the handle in a different location and more recent models do have monitoring/annunciation as required by current certification requirements (the majority, however, are unmonitored/unannunciated systems). Textron Aviation considers this issue to be airmanship related at its source. Given this overall very low rate of occurrence, Textron Aviation does not consider additional action necessary.

Contact Shawn Kohr with questions at 316-517-6130 or Skohr@txtav.com.

Sincerely,

FOR Robert Ramey, Manager
Continued Operational Safety
Textron Aviation

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