



NTSB MEMORANDUM FOR RECORD

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Date: 8/30/2021
Persons Contacted: Paul Arakawa (Diamond Aircraft), David Vandenberg (FAA Inspector)
NTSB Accident Number: ERA21LA322

Narrative:

The below contents are a summary of what was reported by the Diamond Aircraft Representative and FAA Inspector who supervised the examination of the aircraft at the accident site:

The "Operational Test of the Variable Elevator Stop" as provided in the Maintenance Manual was utilized in part to evaluate the flight controls on the accident aircraft. The variable elevator stop system performed according to the test without any abnormalities observed. All flight control functionality was confirmed from the cockpit to the flight control surfaces. The manual elevator trim operated normally. The electric trim was disabled and would not function. The autopilot circuit breaker was found pulled and collared, which also deactivated the electric trim. Figure 1 on the following page shows the test procedures for the variable elevator stop system.



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D42L AMM

Diamond
AIRCRAFT

Maintenance Practices

6. Operational Test of the Variable Elevator Stop

	Detail Steps/Work Items	Key Items/References
1.	Remove pilot's seat.	Refer to AMM # 7.02.01 Chapter 25-10.
2.	Connect the aircraft battery.	Refer to AMM # 7.02.01 Chapter 24-31.
3.	Set the ELECT MASTER to ON.	Refer to Chapter 24-00.
3.	Set the Flaps to the UP position and move the THROTTLE levers full forward.	The stick limiter should engage and move the stick limiter actuator slightly to the right.
4.	Move the THROTTLE to the full back position.	The stick limiter should disengage and move the stick limiter actuator slightly to the left.
5.	Move the THROTTLE levers full forward again.	The stick limiter should engage and move the stick limiter actuator slightly to the right.
6.	Once the stick limiter is engaged, select the Flaps to the APP position.	The stick limiter should disengage and move the stick limiter actuator slightly to the left.
7.	Cycle the THROTTLE levers full forward and back.	The stick limiter should not engage.
8.	Set the Flaps to the LDG position.	
9.	Cycle the THROTTLE levers full forward and back.	The stick limiter should not engage.
10.	Move the THROTTLE levers full forward and set the Flaps to the UP position.	The stick limiter should engage and move the stick limiter actuator slightly to the right.
11.	Move the THROTTLE levers to the IDLE position.	
12.	Set the ELECT MASTER to OFF.	Refer to AMM Chapter 24-00.
<u>NOTE:</u> Activation of the limiter should occur at a power lever setting that will give 14.5 ± 0.5 inHg (368.3 ± 12.7 mmHg) MP. This should be checked with engines running after the operational test. Refer to maintenance check flight on ground check in Chapter 05-20.		

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Figure 1: Operational Test of the Variable Elevator Stop