

DCA22MA009

**OPERATIONAL FACTORS/HUMAN PERFORMANCE**

Group Chair's Factual Report - Attachment 10

Boeing Flight Operations Bulletin 80-2-017 Elevators Not Jammed Verification

October 26, 2022



MD-80 Flight Crew Operations Manual

**Operations Bulletin 80-2-017**

SUBJECT: ELEVATORS NOT JAMMED VERIFICATION  
EFFECTIVITY: All  
REFERENCES: MD-80 AFM  
SUMMARY: This Operations Bulletin provides operators with the background and methods in compliance with the new WARNING statement in the MD-80 FLIGHT CREW WALKAROUND INSPECTION – Temporary Revision 80-2-153, which requires confirmation prior to each flight that elevators are not jammed in (TED) Trailing Edge Down position.  
Retain this Operations Bulletin until advised to remove it.

**Background**

There have been two in-service MD-80 events in which one elevator was jammed Trailing Edge Down (TED), and the airplane could not be rotated during takeoff. Both events resulted in the pilots rejecting the takeoff at very high speed. In one event, the airplane was stopped safely on the runway. The other event resulted in a runway overrun.

In both cases, while parked prior to the events, the airplanes were exposed to high winds and gusts. Damage resulted to the elevator control system that caused one elevator to be jammed full Trailing Edge Down (TED). In these cases, the control column was free to move normally during the TAXI checklist control rollout. Although the control column feel and travel were normal, the jammed elevator did not respond to pilot pitch input during attempted rotation.

Consequently, it has been determined that a visual confirmation that elevator surfaces are not jammed TED is required before flight.

**General**

The FCOM contains the following CAUTION statement at the beginning of the EXTERIOR INSPECTION PROCEDURE:

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**OPERATIONS BULLETIN 80-2-017** (Continued)

***CAUTION: Airplanes that are exposed to high-sustained winds, or wind gusts, greater than 55 knots are susceptible to elevator damage and/or jamming. Airplanes suspected to have been subjected to these conditions must be inspected per the Aircraft maintenance manual prior to flight.***

The FCOM has been revised per TR 80-2-153 to include a new WARNING at the beginning of the EXTERIOR INSPECTION PROCEDURE requiring elevator TED jam evaluation prior to every flight:

**WARNING: Prior to every flight, elevator surfaces must be confirmed as not jammed in the Trailing Edge Down (TED) position. If both elevators are faired with, or above the stabilizer surface, confirmation is complete.**

The limitations section of both the FCOM and AFM have been revised to require this elevator preflight evaluation.

**Elevator Visual Inspection**

During the EXTERIOR INSPECTION PROCEDURE, if the Trailing Edges of both elevators are faired with or above the trailing edge of the stabilizer, the elevators are confirmed to be not jammed TED. If the above conditions are not met, further action is required.

**Elevator TED Jam Verification**

An elevator that is not faired with or above the trailing edge of the stabilizer can be verified not jammed TED by moving the control column to the full aft stop and confirming that the elevator moved in the Trailing Edge Up (TEU) direction. Movement of the column aft to a position less than full travel (approximately 95%) moves the elevator control tab to the control tab stop. Additional column movement of approximately 5%, to the control column aft stop, will cause the elevator to move towards TEU. Because this last column motion lifts the elevator, substantial physical effort is required. While the column is pulled to its aft stop, if movement of the elevator in the TEU direction is seen by an external observer, the elevator is confirmed not jammed TED. If no TEU movement is observed, inspection of the elevators per the Aircraft Maintenance Manual is required before flight.

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**OPERATIONS BULLETIN 80-2-017** (Continued)**Means of Confirmation Summary**

The following are satisfactory methods for a flight crew to confirm elevators are not jammed TED. Other methods may be developed by an operator. If a flight crew cannot confirm elevators are not jammed TED, inspection of the elevators per the Aircraft Maintenance Manual is required before flight:

- Observe whether both elevator trailing edges are faired with or above the trailing edge of the stabilizer. If one or both elevators are not faired with or above the trailing edge of the stabilizer, a flight crew may:
  - Contact ground personnel prior to pressurizing the hydraulic system, as procedurally required while accomplishing the BEFORE START checklist, and perform a coordinated check of elevator freedom of movement between the flight crew and ground personnel. Move either control column full forward until the ELEVATOR PWR ON light illuminates (elevators TED) and then check for any upward movement of the elevators as the control column is moved fully aft.

OR

- Pull a control column to the full aft stop prior to leaving the cockpit to conduct the preflight external inspection. The elevators may remain displaced and allow the pilot to confirm the elevators are aligned with, or above, the trailing edge of the stabilizer during the exterior inspection.

OR

- Perform an approved coordinated procedure between the captain and first officer, one pulling the column while the other observes movement of any elevator that is not faired or above the trailing edge of the stabilizer.



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