

## 5.12 Boeing Correspondence: Multi Operator Messages

FROM: THE BOEING COMPANY  
TO: Boeing Correspondence (MOM)  
[MESSAGE NUMBER:MOM-MOM-18-0664-01B] Multi Operator Message  
MESSAGE DATE: 10 Nov 2018 1810 US PACIFIC TIME / 11 Nov 2018 0210 GMT

This message is sent to all 737NG/MAX Customers, Regional Directors, Regional Managers and Boeing Field Service Bases.

CATEGORY: Maintenance, Engineering, Flight Operations, Management, Safety

SERVICE REQUEST ID: 4-4298138108  
ACCOUNT: Boeing Correspondence (MOM)  
DUE DATE: No Action Required  
PRODUCT TYPE: Airplane  
PRODUCT LINE: 737  
PRODUCT: SEVERAL  
ATA: 0000-57

SUBJECT: Information - Multi-Model Stall Warning and Pitch Augmentation Operation

REFERENCES:  
/A/ MOM-MOM-18-0655-01B

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**SUMMARY:**

Boeing has received many requests for the same information from 737 fleet operators in response to the reference /A/ message. This message provides technical information and operational details.

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**DESCRIPTION:**

A pitch augmentation system function called "Maneuvering Characteristics Augmentation System" (MCAS) is implemented on the 737-8, -9 (MAX) to enhance pitch characteristics with flaps UP and at elevated angles of attack. The MCAS function commands nose down stabilizer to enhance pitch characteristics during steep turns with elevated load factors and during flaps up flight at airspeeds approaching stall. MCAS is activated without pilot input and only operates in manual, flaps up flight. The system is designed to allow the flight crew to use column trim switch or stabilizer aisle stand cutout switches to override MCAS input. The function is commanded by the Flight Control computer using input data from sensors and other airplane systems.

The MCAS function becomes active when the airplane Angle of Attack exceeds a threshold based on airspeed and altitude. Stabilizer incremental commands are limited to 2.5 degrees and are provided at a rate of 0.27 degrees per second. The magnitude of the stabilizer input is lower at high Mach number and greater at low Mach numbers. The function is reset once angle of attack falls below the Angle of Attack threshold or if manual stabilizer commands are provided by the flight crew. If the original elevated AOA condition persists, the MCAS function commands another incremental stabilizer nose down command according to current aircraft Mach number at actuation.

The MCAS function is not incorporated on 737NG airplanes.

If you have further questions, you may contact the appropriate Airline Support Manager.

Customer Support  
The Boeing Company