2015

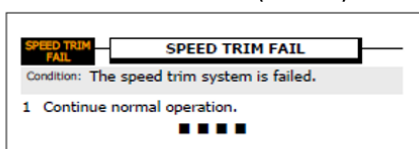## 2.2.2.1. Maneuver Characteristics Augmentation System (MCAS)

The larger diameter LEAP-1B engines on the 737 MAX degrade high-speed pitch up characteristics compared to the 737 NG. The MCAS control law, along with a revised vortex generator pattern, were added to the MAX to provide approach-to-stall feel forces consistent with those required in AC 25-7B.

The MCAS control law is housed in each Flight Control Computer. MCAS applies incremental nose-down stabilizer trim inputs when flaps are up and the load factor is 1.3g or greater to reduce pitch-up and provide consistent column forces. The inputs and outputs to MCAS are similar to the Speed Trim control law. Faults that affect MCAS also affect Speed Trim and are annunciated with the Speed Trim Fail indication on the flight controls panel.
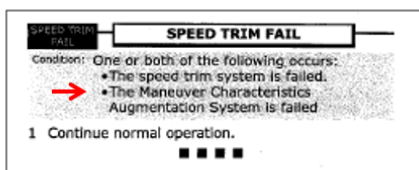
Task #	Description	State	Hazards	Risk	Mitigation
	Flight Controls - ATA 27				
15172	SPEED TRIM FAIL - QRH Change	OSC review	No Hazard	No	None

- **NG:** MCAS not installed
- **MAX:** If the Maneuver Characteristics Augmentation System (MCAS) has failed
  - The **SPEED TRIM FAIL** amber light will illuminate.
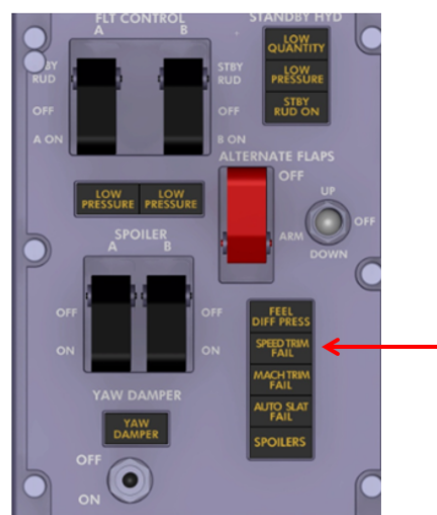- **QRH Change:** Revised the **SPEED TRIM FAIL** checklist adding an additional Condition

SPEED TRIM FAIL (NG QRH)

SPEED TRIM FAIL   SPEED TRIM FAIL

Condition: The speed trim system is failed.

1 Continue normal operation.

■ ■ ■ ■

SPEED TRIM FAIL (MAX QRH)

SPEED TRIM FAIL   SPEED TRIM FAIL

Condition: One or both of the following occurs:
- The speed trim system is failed.
- The Maneuver Characteristics Augmentation System is failed

1 Continue normal operation.

■ ■ ■ ■

SPEED TRIM FAIL Overhead panel MAX

2017

9.18

SPEED TRIM FAIL	SPEED TRIM FAIL

Condition: The speed trim system is failed.

1 Continue normal operation.

■ ■ ■ ■