ALERT BULLETIN

AB 2021:11/3-5
6/11/2021
1797357

TO: Boeing Commercial Airplane Company

INFO: FAA (AVP-1, AVP-200, AFS-200, AFS-900, AFS-280, AFS-100, AIR-720, AIR -780, AIR-360, SEA-AEG, AQS-230), A4A, ALPA, AMFA, ASAP, ATSG, CAPA, IAM, IBT, ICAO, ICASS, IFALPA, IPA, NTSB, PAMA, RAA, SWAPA, TWU

FROM: Becky L. Hooey, Director
NASA Aviation Safety Reporting System

SUBJ: B737 MAX 8 Stabilizer Trim Issue

We recently received ASRS reports describing a safety concern that may involve your area of operational responsibility. We do not have sufficient details to assess either the factual accuracy or possible gravity of the report. It is our policy to relay the reported information to the appropriate authority for evaluation and any necessary follow-up. We feel you should be aware of the following:

ASRS received reports from a B737 MAX 8 flight crew describing a stabilizer trim issue that resulted in the autopilot disengaging during climbout.

The crew reported having intermittent difficulty with the electric trim on the control yoke, which later became unresponsive. The Captain stated, "At this point the Speed Trim system appeared to actuate for about half a second and never actuated again."

Reportedly, the crew attempted to engage the autopilot, but neither the A nor B autopilots would engage. The crew ran the appropriate checklists and decided to hand fly the aircraft for a return to departure airport.

The Captain stated via Callback that "...it was learned that the electric stabilizer trim failure was possibly due to a relay which had failed."

To properly assess the usefulness of our alert message service, we would appreciate it if you would take the time to give us your feedback on the value of the information that we have provided. Please contact Dr. Becky Hooey at (408) 541-2854 or email at becky.l.hooey@nasa.gov.

Aviation Safety Reporting System
P.O. Box 189 | Moffett Field, CA | 94035-0189

ACN 1797357	
DATE / TIME	
Date of Occurrence	202103
Local Time Of Day	0601 to 1200
PLACE	
Locale	ZZZ.Airport
State	US
AIRCRAFT / EQUIPMENT X	
ATC / Advisory - TRACON	ZZZ
Make Model Name	B737 MAX 8
Operating Under FAR Part	121
COMPONENT 1	
Aircraft Component	Horizontal Stabilizer Trim
PERSON 1	
Function - Flight Crew	First Officer
Function - Flight Crew	Pilot Flying
ASRS Report Number	1797357
PERSON 2	
Function - Flight Crew	Captain
Function - Flight Crew	Pilot Flying
ASRS Report Number	1797362
EVENTS	
Anomaly	Aircraft Equipment Problem - Less Severe
Anomaly	Deviation / Discrepancy - Procedural - Published Material / Policy
Detector - Person	Flight Crew
Result - Flight Crew	Landed As Precaution
Result - Flight Crew	Landed in Emergency Condition
Result - Flight Crew	Requested ATC Assistance / Clarification
Result - Flight Crew	Returned To Departure Airport
Result - Air Traffic Control	Provided Assistance

NARRATIVE 1

Out of an abundance of caution and to the best of my memory I can recall that shortly after the initial climb and in a clean configuration the Captain alerted me that he had some difficulty with the electric trim on his control yoke. I observed that it was indeed intermittent. After I completed the Climb Checklist we tried some trouble-shooting with both autopilots and my trim switch. With no caution lights, I referred to the QRH to help diagnose the issue with the proper checklist. During this time the Captain was contacting Dispatch and Maintenance for assistance while I talked to ATC. At some point in this process we were able to notice that my autopilot would engage and I became the Pilot Flying. We stopped the climb and slowed the aircraft. The Captain proceeded with the Stabilizer Trim Inoperative Checklist which calls to cutout both stab trim cutout switches and manually trim the aircraft. As I flew manually we elected to advise ATC and return to ZZZ. The Captain informed the Company, ATC, flight attendants and passengers and offered his assistance to me. I vaguely recall that during the descent a Speed Trim Fail light illuminated as a result from the cutout switches being selected to cutout. There was some discussion that we may or may not be over the max landing weight upon arrival and therefore an AML entry was entered after landing along with a Speed Trim Fail, Stabilizer

Trim Failure, and inoperative autopilots entries. I performed a safe Flaps 15 landing [and] all passengers and crew deplaned safely with no injuries.

I can attest that the training I have received was very beneficial to the successful outcome from this event. I believe as a crew we worked the problem out very well with the strategy and am thankful for the Captain's knowledge, professional conduct, and reassurance to everyone for a safe outcome.

The mechanic did state that perhaps the event may have been caused by a software issue.

NARRATIVE 2

During climbout and after cleanup, I noticed that the electric stabilizer trim was intermittent. Then it became unresponsive. At this point the Speed Trim system appeared to actuate for about half a second and never actuated again. We attempted to engage the A autopilot. It wouldn't engage. The B autopilot did engage and I passed control of the aircraft to the FO (First Officer). We conducted the "Stabilizer Trim Inoperative" checklist. Within about 5 minutes of engaging the B, it disengaged itself and the FO hand flew the aircraft for the remainder of the flight. We advised ATC and returned to ZZZ. We selected Runway XX and requested a 15 mile final to get fully configured and trimmed as well as possible. The FO was able to manually trim the aircraft without difficulty. During the descent, at about 12,000-15,000 feet, the "Speed Trim Fail" light illuminated. We conducted a Flaps 15 landing and taxied back to the gate. I made an AML entry for the Stab Trim, Speed Trim Fail light and for possible overweight landing.

I think the focus of the MAX simulator session was helpful in dealing with this situation.

CALLBACK 1

Reporter stated they were unable to manually trim the aircraft until the trim cutout switches were engaged. Post flight, it was learned that the electric stabilizer trim failure was possibly due to a relay which had failed.

SYNOPSIS

B737 MAX 8 flight crew reported a stabilizer trim issue that resulted in the autopilot disengaging during climbout. The flight crew elected to return to the departure airport.