ALERT BULLETIN

AB 2019:4/3-2
5/9/2019
1602782

TO: Boeing Commercial Airplane Company, FAA (AFS-900)

INFO: FAA (AVP-1, AVP-200, AFS-200, AFS-280, AFS-100, ANM-100, SEA-ACO, SEA-AEG, AQS-230), A4A, AFA, ALPA, AMFA, APFA, ASAP, ATSG, CAPA, IAM, IBT, ICAO, ICASS, IFALPA, NTSB, PAMA, TWU

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

SUBJ: B737NG Uncommanded Stabilizer Trim

We recently received an ASRS report 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 a report from a B737 NG Captain describing abnormal pitch trim activity with the autopilot engaged. Reporter stated the pitch trim would operate for a few seconds, then operate in the opposite direction, with attendant speed variations over a 20-knot range. Pitch trim was reported to be normal with the autopilot disengaged. Reporter indicated that after discussion with Dispatch they returned to departure airport.

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 Dennis Doyle at (408) 541-2831 or email at dennis.j.doyle@nasa.gov

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

ACN: 1602782

Time
Date: 201812
Local Time Of Day: 0601-1200

Place
Locale Reference.Airport: ZZZ.Airport
State Reference: US
Altitude.MSL.Single Value: 10000

Environment
Flight Conditions: VMC

Aircraft 1
Make Model Name: B737 Next Generation Undifferentiated

Component 1
Aircraft Component: Horizontal Stabilizer Trim

Person 1
Function.Flight Crew: Pilot Flying
Function.Flight Crew: Captain
ASRS Report Number: 1602782

Events
Anomaly.Aircraft Equipment Problem: Critical
Detector.Person: Flight Crew
Result.Flight Crew: Overcame Equipment Problem
Result.Flight Crew: Returned To Departure Airport

Narrative 1

Noted on preflight, a write up, for a cycling trim situation on the inbound leg. With no faults noted by maintenance, it was cleared. First Officer (FO) and I discussed the situation as one of the threats possible, with emphasis on being alert for the cycling trim situation to possibly repeat. Reviewed applicable procedure for a possible runaway trim scenario. Upon takeoff, Autopilot A was engaged at approximately 1,200 FT AGL. As flaps were retracted and airspeed began to increase, additional trim inputs were immediately noticed by both pilots. With flaps now up, FMC called for 250 KTS. Aircraft pitched to 260 KTS with trim inputs, then re-pitched to 240 KTS. The trim system would activate for 1-2 seconds and then immediately reverse itself, trimming in opposite direction. I directed FO to ask for intermediate stop on climb, where we then stopped at FL230. Advised ATC we were experiencing a trim system problem, but the aircraft was stable and trim stopped fluctuating once a stable and level pitch was attained. I chose not to declare an emergency at this time as we did have a stable aircraft, but contacted dispatch via radio, and informed dispatcher of the situation, that it was a reoccurring event, and that I was not comfortable taking the aircraft to ZZZ1 with a primary flight control system not operating properly. Therefore I would return to ZZZ. Dispatcher brought Maintenance Control in I believe at that point and I gave them a description of the problem. We then completed those calls, informed ATC of our desire to return to ZZZ, and no emergency being declared at this time. The trim problem immediately reappeared when given a descent to 11,000, executed via Level Change on the Mode Control Panel. I was flying and at that point disconnected the autopilot, and hand flew the remainder of the approach to the landing. No trim problems were noted with autopilot disconnected. Maintenance ACARSed us several times, requesting us to attempt to troubleshoot the failure and gather information. I elected to not do

this. I knew I had a failed trim system and did not wish to engage a deeper problem if something else went wrong with the system while troubleshooting. In addition we [were] now under 15000 FT, in the terminal area, and I was hand flying the aircraft. Too many distractions, as well as a potential bigger problem if something else went wrong. We both put on the table the trim motor / elevator jackscrew failure a few years back that happened to another carrier. That situation was perhaps the final reason I did not want to troubleshoot the failure. We finally told Maintenance Control via ACARS. "We are busy ", as they were now a distraction with their requests as we were near or under 10,000 FT. Aviate, Navigate, Communicate. That is what I start every brief off with a new pilot at the beginning of a trip.

Synopsis

B737NG flight crew reported a trim problem during climbout resulting in a return to field.