

ALERT BULLETIN

AB 2015:21/3-8

5/29/2015

1254723

TO: Boeing Commercial Airplane Company

INFO: FAA (AVP-1, AVP-200, AFS-200, AFS-280, AFS-300, ANM-100, SEA-ACO, SEA-AEG, AQS-230), A4A, ALPA, AMFA, ASAP, ATSG, CAPA, IAM, IATA, ICAO, ICASS, NTSB, PAMA, RAA, TWU, SWAPA, USAPA

FROM: Linda J. Connell, Director
NASA Aviation Safety Reporting System

SUBJ: B737-800 Control Column Free Play in Cruise

We recently received an ASRS report describing a safety concern which 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 B737-800 flight crew describing an excessive amount of free play in the elevator control column in cruise flight. The Captain reporter stated he noticed a fore and aft range of travel of about eight inches and that it "felt like it wasn't attached to anything." Flight crew decided to keep the autopilot engaged during descent, ultimately landing normally with what was described as a "soft" elevator feel. Crew was advised in post flight discussions the issue may be related to different fuselage and control cable shrinkage rates in cold environments.

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: 1254723

Time

Date: 201504

Local Time Of Day: 1801-2400

Environment

Flight Conditions: VMC

Aircraft 1

ATC / Advisory.Center: ZZZ

Make Model Name: B737-800

Component 1

Aircraft Component: Elevator Control Column

Person 1

Function.Flight Crew: Captain

Function.Flight Crew: Pilot Flying

ASRS Report Number: 1254723

Person 2

Function.Flight Crew: First Officer

Function.Flight Crew: Pilot Flying

ASRS Report Number: 1255259

Events

Anomaly.Aircraft Equipment Problem: Critical

Detector.Person: Flight Crew

Result.General: Maintenance Action

Result.Flight Crew: Landed in Emergency Condition

Narrative 1

Flight was normal until approximately 60 miles before top of descent. While trying to write down a position report I noticed the control column freely moved fore and aft. Range of travel was approximately 8 inches. It felt like it wasn't attached to anything. We had both heard of similar events. My First Officer's input was that they talked about this in training and Boeing said not to disconnect the autopilot in this situation. My recollection of a similar event years ago on a B767. In that event freezing precipitation was the issue. The autopilot was flying the airplane normally. We talked about our options and decided it was best to leave the autopilot on and descend to a lower altitude using very deliberate and slow inputs so as to not disturb autopilot operation. Our hope was that the condition would improve as we descended. We consulted the QRH but there was no procedure commensurate with our problem. Contacted ATC then I called dispatch, and told them we needed an immediate patch to Maintenance. After some initial communication problems with them, Maintenance informed me that he had never heard of a problem like this. Therefore with no guidance we kept working the problem by descending slowly and leaving the autopilot on.

I called the flight Attendants and told them about our issue, asked them to do their 30 second review, and gave them the TEST items. We told ATC that we need time to get down and continue working the problem. We asked for the ILS. The situation was slowly improving as we descended. Going through FL300 not much. But in the mid 20s some improvement, but still not normal. We overflew the final course on a southerly heading and later asked for a turn out to the west and a minimum 20 mile final. When descending through 11,000 and trying to turn

westerly we dropped into CWS and we could not recover any flight director modes. Heading select wouldn't work, resetting the flight directors didn't help. I elected to take it out of CWS as I could feel elevator authority now. Elevator still felt soft. We turned a long final and slowly, very deliberately, configured the aircraft. As we got closer I had confidence that the elevator was going to work fine. I elected to land flaps 30 and we landed with a soft touchdown and no further issues. My First Officer and cabin crew did a fantastic job and were true professionals, calm and collected in the face of adversity.

It is my understanding this is the second such event. I would hope that Boeing comes up with an explanation and a procedure to fix or avoid it, and a checklist to deal with it.

Callback 1

The reporter states that Boeing is aware of the problem and that it is caused by different shrinkage rates of the B737NG fuselage and the elevator control cables. In this case the aircraft was at FL410 with an OAT of minus 65 degrees C.

Narrative 2

[Report narrative contained no additional information].

Synopsis

B737-800 flight crew report discovering in cruise that their control column can be moved freely about eight inches fore and aft, without disturbing the autopilot or producing elevator movement. The flight continued to destination with the autopilot engaged. During a turn at 11,000 feet the autopilot becomes disengaged and cannot be reengaged. Although the elevator felt soft the Captain is able to manually land the aircraft.