

7/23/2010

FOR YOUR INFORMATION

2010-118/3-33

881756

To: FAA (AFS-300)

Info: FAA (AFS-200, AFS-230, ANM-100, SEA-AEG, ASA-100), BOEING COMMERCIAL AIRPLANE COMPANY, AASC, AMFA, IAM, PAMA, TWU

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

Re: B737-300 Elevator Maintenance and Troubleshooting Procedures

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 enclosed deidentified report.

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 Gary Brauch at (408) 541-2800 or email at gary.j.brauch@nasa.gov.



Aviation Safety Reporting System
385 Moffet Park Dr · Suite 200 · Sunnyvale · CA · 94089



ACN: 881756

Time

Date: 201003

Local Time Of Day: 0601-1200

Place

Locale Reference.Airport: ZZZ.Airport

State Reference: US

Altitude.AGL.Single Value: 0

Environment

Aircraft 1

Make Model Name: B737-300

Component 1

Aircraft Component: Elevator ControlSystem

Component 2

Aircraft Component: Elevator Feel System

Person 1

Function.Flight Crew: Captain

Function.Maintenance: Lead Technician

ASRS Report Number: 881756

Events

Anomaly.Aircraft Equipment Problem: Critical

Anomaly.Deviation - Procedural: FAR

Anomaly.Deviation - Procedural: Published Material / Policy

Anomaly.Deviation - Procedural: Maintenance

Detector.Person: Flight Crew

Result.General: Maintenance Action

Narrative 1

On March XX and XY, 2010, a B737-300, had it's 6th and 7th "Stiff Elevator", inflight occurrence--with, again, no remedy other than cleaned Feel Control Unit and/or operational checks good. It should be noted that the first five write-ups of stiff elevator occurred from Jan XX, 2007 (in ZZZ after an aircraft wash in ZZZ1,) thru January 2010 with similar "Operational checks good on ground" signoffs. (One Technician tensioned cables). Most recently, Captain "X" on March XY, 2010, indicated in the Logbook "could not increase pitch" and Captain "Y" a few days earlier (March XX) had logged "Elevator unresponsive". Was Maintenance Control waiting for a hard failure of the elevator control? So why fly it revenue [passengers] with intermittent elevator control failures?? Putting safety first, and before a revenue flight last fall during the 4th incident in ZZZ2, this aircraft should have had both 60,000 hour elevator Power Control Units (PCU)'s replaced as precautionary AND a full cable run Inspection AND a Test Flight with numerous touch and go's since all write-ups are flare related. My major safety concern is that these random incidents do not fit our profile for chronic reporting, and subsequently there was no action on Maintenance Control to ground this aircraft for a nose-to-tail detailed visual inspection. Logs were signed-off as "Inspected exposed cables". When it comes to finding a worn part this falls way short of being thorough. Removing floor boards and cargo ceiling panels are just the start of getting serious about finding a flight control failure on a B737. Another concern is that the Technicians are following the Maintenance Manual perhaps without

knowledge that this was the 3rd, 4th, 5th, 6th, and 7th "Elevator stiff" Log with "No Corrective Action" other than "cleaned and "Operational checks normal". Finally, since both write-ups, "Could not increase pitch" and "Elevator Unresponsive" are indicative of failed components, that shows that several of the seven Technicians who signed-off the Logbook as "Operational checks good", must have had reasonable doubts that the problem would just go away. And each time the problem arose again and would not duplicate on the ground, the Maintenance Control people should have had the good judgment to ground it for precautionary part replacement and test flights. Throw bad weather in and an accident was assured.

Callback 1

Reporter stated their maintenance system for chronic reporting is failing. An aircraft's chronic history is generally displayed for only the last thirty days. When this particular B737-300 comes in with a landing flare write-up of "Elevator Unresponsive", all the Mechanic sees is the last thirty days that may or may not show a similar, previous write-up. The Line Mechanic unknowingly ends up repeating the same maintenance corrective procedure that was accomplished previously; which did not correct the problem. Reporter stated compounding the issue of removing the aircraft from revenue service to do test flights and adequate trouble shooting may be due to the same aircraft is on a scheduled program for retirement to the desert. Their Maintenance Control did not seem interested in spending the time to address the chronic elevator issue. Even the two elevator Power Control Units (PCU's) had over 65,000 hours in service and should have been changed much earlier. Their average elevator PCU's have only 20,000 to 24,000 hours of service time. Reporter stated many times aircraft are retired to the desert, only to be re-activated later back into revenue service. If re-activation were to happen with this B737 after retirement, without correcting the cause, and another landing flare write-up of "Elevator Stiff" or "Elevator Unresponsive" reoccurs, Mechanics would reasonably believe the elevator issue just began since the aircraft was re-activated. Reporter stated they don't know at this time if moisture is getting into the elevator pitot tubes, or a pitot line is misrouted, or water is freezing inside a pitot line. He doesn't believe the Elevator Feel Computer has been changed. Reporter stated he wants to make their chronic reporting system more pro-active instead of reactive and doesn't want to see any aircraft with maintenance issues not be repaired just because the aircraft is scheduled for retirement.

Synopsis

A Line Lead Mechanic reports a B737-300 evidenced repeated "Stiff Elevator" inflight occurrences, with no remedy other than cleaned Feel Control Unit or Operational Checks OK. Initial write-ups occurred after aircraft wash and all write-ups were landing flare related. No test flights or full elevator cable run inspections were accomplished.