Safety Regulation Group
Safety Investigation and Data Department

Follow-up Action on Occurrence Report

SERIOUS INCIDENT INVOLVING DE HAVILLAND CANADA DHC8, G-BRYJ, 25 MILES NORTH OF EDINBURGH ON 2 MARCH 2003

(CONTROL RESTRICTIONS IN CLIMB)

CAA FACTOR NUMBER	:	F5/2004
FACTOR PUBLICATION DATE	:	12 January 2004
OPERATOR	:	BA CitiExpress
CAA OCCURRENCE NUMBER	:	2003/01223
AAIB REPORT	:	Bulletin 12/2003

SYNOPSIS

(From AAIB Report)

The aircraft, in the climb with the autopilot engaged, failed to level at the selected altitude of FL170. The combined effort of both pilots to level the aircraft manually was also ineffective. The recall actions for an 'elevator jam' were initiated and reduced elevator authority was regained on selection of the 'pitch disconnect handle'. The crew transmitted a 'MAYDAY' and, without further incident, and with the assistance of radar vectors, carried out as flapless landing on Runway 24 at Edinburgh. Even though the anti-icing systems were used during the climb, flight data analysis suggested that the control difficulties were due to a restriction of the right elevator spring tab brought about by ice contamination. Post flight examination revealed the presence of re-hydrated residues of anti-icing fluids remaining from previous fluid applications. It is possible that this re-hydrated gel, very low in glycol content and with a freezing point of approximately -1.1ºC, had frozen around the bearings. Two safety recommendations are made: The first addresses the implementation of advice given to operators on airframe inspections and cleaning of aerodynamically 'quiet areas' where residues can accumulate, and the second highlights the need for anti-icing fluid manufacturers to develop gelling agents, with suitable holdover times, that are not re-hydratable.

FOLLOW UP ACTION

The two Safety Recommendations made by the AAIB following their investigation are reproduced below, together with the CAA's responses.

Recommendation 2003-81

It is recommended that the Civil Aviation Authority satisfy itself that operators have in place the necessary measures to ensure that they have adopted the advice given in AIC 81/2001.

CAA Response

The CAA accepts this Recommendation.

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In order to ascertain that operators have satisfactorily prepared for this winter's operations, including adopting the advice given in AIC 81/2001, the CAA is conducting a Special Objective Check (SOC) of AOC Holders. This SOC consists of the assigned Flight Operations Inspector conducting an interview with the operator, the completion of a questionnaire and the review and production of a report on the findings. This SOC will be complete by January 2004.

In addition to the SOC, UK AOC Holders and a number of other relevant organisations are being provided with a CD-ROM containing the CAA 'Ice Aware' film, the text of AIC 105/2003 (Pink 61 -"Recommendations for De-icing/Anti-icing of Aircraft on the Ground") which will be published on 11 December 2003, a copy of FODCOM 23/2003 which covers winter operations and Edition 18 of the Association of European Airlines document 'Recommendations for De-icing/Anti-icing of Aircraft on the Ground'. Also being distributed is a DVD, produced by NASA and containing three films entitled 'Icing for Regional and Corporate Pilots', 'Icing for General Aviation Pilots' and 'Tailplane Icing'. The CD and DVD are particularly intended to be used for the instruction and training of the flight crew and maintenance personnel.

CAA Status - Closed

Recommendation 2003-82

The Civil Aviation Authority should consult with anti-icing fluid manufacturers with a view to encouraging them to develop fluids, with suitable 'holdover' times, that incorporate gelling agents that are not rehydratable.

CAA Response

The CAA partially accepts this Recommendation.

The CAA believes that the best way to encourage anti-icing fluid manufacturers to develop fluids with suitable holdover times that incorporate gelling agents that are not rehydratable is to submit a proposal to the SAE committee that develops the fluids specifications. Therefore, the CAA will propose to the SAE Fluids Committee that consideration should be given to developing a specification for a fluid with suitable holdover times that incorporate gelling agents that are not rehydratable, and of establishing a practical way of setting a pass/fail limit for the fluid. This proposal will be submitted to the secretary of the SAE Fluids Committee for discussion at the meeting in March/April 2004. The CAA will monitor the action taken in respect of the proposal and will then decide what if any further action is required.

CAA Status - Open