



REASSESSMENT OF THE RESPONSES FROM TRANSPORT CANADA AND THE FEDERAL AVIATION ADMINISTRATION TO AVIATION SAFETY RECOMMENDATION A00-18

INCONSISTENT INDUSTRY PHILOSOPHY ABOUT DIVERSION DUE TO ODOUR/SMOKE

Background

On 02 September 1998, Swissair Flight 111, a McDonnell Douglas MD-11 aircraft, departed John F. Kennedy Airport in New York, New York, en route to Geneva, Switzerland. Approximately one hour after take-off, the crew diverted the flight to Halifax, Nova Scotia, because of smoke in the cockpit. While the aircraft was manoeuvring in preparation for landing in Halifax, it struck the water near Peggy's Cove, Nova Scotia, fatally injuring all 229 occupants on board. The investigation revealed that the flight crew had lost control of the aircraft as a result of a fire in the aircraft's ceiling area, forward and aft of the cockpit bulkhead.

On 04 December 2000, the Board released interim safety recommendations as part of its investigation (A98H0003) into this occurrence.

Board Recommendation A00-18 (04 December 2000)

Along with initiating the other elements of a comprehensive firefighting plan, it is essential that flight crews give attention without delay to preparing the aircraft for a possible landing at the nearest suitable airport. Therefore, the Board recommended that:

Appropriate regulatory authorities take action to ensure that industry standards reflect a philosophy that when odour/smoke from an unknown source appears in an aircraft, the most appropriate course of action is to prepare to land the aircraft expeditiously.

A00-18

Responses to A00-18 (Transport Canada - 06 March 2001 and Federal Aviation Administration - 18 January 2001)

On 19 December 2000, Transport Canada (TC) sent a letter to the United States Federal Aviation Administration (FAA) and the European Joint Aviation Authorities (JAA). The letter supported the intent of the recommendations, acknowledged that none of the issues can be addressed in isolation, and invited the major civil aviation regulatory authorities to harmonize a strategy for their resolution.



In this letter, TC also proposed to hold a meeting in March 2001 to discuss the recommendations, to identify existing initiatives and groups that may already address some aspects covered by the recommendations, and to establish a team to develop an appropriate action strategy. The FAA responded positively on 19 January 2001 and a positive response is anticipated from the JAA.

TC will keep the TSB apprised of the outcome of the meeting and of its progress towards achieving the goals of these recommendations.

The FAA responded that it has added TSB's recommendations to the FAA's Safety Recommendation Program to ensure that they are assigned to the appropriate program offices for evaluation and action as necessary. The FAA also indicates that it has agreed to meet with TC over this matter and that the Office of Aircraft Certification, specifically the Manager of the Transport Airplane Directorate, has been assigned to lead the FAA team in this regard.

Board Assessment of the Responses to A00-18 (19 March 2001)

It is apparent that both TC and the FAA agree with the thrust of the deficiencies and are committed, at least in the short term, to examine these issues and map out a course of action. Collectively, these responses are adequate and constitute a logical "first step." Until such time as the details of the proposed action plan are known, it will remain unclear the extent to which the identified deficiencies will be reduced or eliminated. Although the declared initiatives will not yield any immediate substantive change, the planned action, when fully implemented, will substantially reduce or eliminate the safety deficiency.

Therefore, the responses are considered to be **Satisfactory Intent**.

Next TSB Action (19 March 2001)

TSB staff will closely monitor the progress of the TC/FAA deliberations to determine if their action plan addresses the identified deficiencies.

This deficiency file is assigned an **Active** status.

Response to A00-18 (14 December 2005)

TC's letter to the TSB dated 14 December 2005 advised that, effective 01 December 2004, it had issued Aircraft Certification Advisory Circular 500-014, which introduced changes regarding aircraft flight manuals. The changes affected Section 4.7, Fire and Smoke Procedures, as follows:

- (a) The "Emergency" or "Abnormal" operating procedures section of all AFMs must contain a statement to the effect that:

In the event of smoke or fire, prepare to land the aircraft without delay while completing fire suppression and/or smoke evacuation procedures. If it cannot be visually verified that the fire has been completely extinguished, whether the smoke has cleared or not, land immediately at the nearest suitable airfield or landing site.

(b) The AFM procedures dealing with smoke or fire must minimize the possibility of an in-flight fire being ignited or sustained.

(c) Smoke evacuation procedures should not include the use of the passenger oxygen system.

Board Reassessment of the Response to A00-18 (23 June 2006)

As of 14 December 2005, TC indicates that, on 01 December 2004, it has issued Aircraft Certification Advisory Circular 500-014, which replaces Airworthiness Manual Advisory 500/013. Specifically, this advisory requires that an aircraft flight manual's emergency and abnormal operating procedures must contain a statement to the effect that: "In the event of smoke or fire, prepare to land the aircraft without delay while completing fire suppression and/or smoke evacuation procedures." This action taken will substantially reduce the safety deficiency as described in Recommendation A00-18.

Therefore, the response is assessed as **Fully Satisfactory**.

Next TSB Action (23 June 2006)

No further action is necessary as the safety deficiency associated with Recommendation A00-18 is considered rectified.

This deficiency file is assigned an **Inactive** status.