



REASSESSMENT OF THE RESPONSES FROM TRANSPORT CANADA TO AVIATION SAFETY RECOMMENDATION A03-05

CIRCUIT BREAKER RESET PHILOSOPHY

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.

The Board concluded its investigation and released report A98H0003 on 27 March 2003.

Board Recommendation A03-05 (27 March 2003)

TSB's investigation revealed several disparities in the policies and their interpretation regarding circuit breaker reset practices. The TSB believes that, despite initiatives by regulatory authorities to raise awareness, if the existing regulatory environment is not amended to reflect the acceptable circuit breaker reset philosophy, such "best practices" will not be universally applied across the aviation industry and ultimately, the positive changes currently established may not be maintained. Therefore, the TSB recommended that:

Regulatory authorities establish the requirements and industry standard
for circuit breaker resetting.

A03-05

Response to A03-05 (29 October 2003)

In response to Recommendation A03-05, Transport Canada (TC) provided the following comments:

- TC states that it concurs with Recommendation A03-05.
- TC has requested that the FAA's Transport Airplane and Engine Issues Group (TAEIG) establish the standards for circuit breaker resetting for use by regulatory authorities.



- TC states that it has adopted the FAA's guidance material regarding circuit breaker resets.
- By January 2004, TC intends to perform a review of aircraft flight manuals and flight crew operating manuals for those aircraft for which TC is prime design authority to ensure that adopted guidance material is included.
- TC intends to issue advisory material to all operators by the end of September 2003.
- TC will publish an article in the Aviation Safety Maintainer concerning the resetting of circuit breakers.

Board Assessment of the Response to A03-05 (29 October 2003)

TC's response lists a variety of proposed activities, which will raise awareness amongst operators, pilots, and maintainers regarding the appropriate circuit breaker reset procedures. Additionally, a recommendation from the FAA's TAEIG, if adopted, should establish the requirements and industry standards needed to mitigate the risks in the long term. Consequently, the response is assessed as **Satisfactory Intent**.

Next TSB Action (29 October 2003)

The TSB Air Branch will continue to liaise with TC to ensure a common understanding and monitor its efforts to change the regulatory environment and industry standards with respect to the issue of circuit breaker reset procedures.

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

Response to A03-05 (14 December 2005)

TC advised that it has developed Policy Letter 161, which was issued March 2004 entitled *Resetting Tripped Circuit Breakers*.

Board Reassessment of the Response to A03-05 (23 June 2006)

TC's letter of 14 December 2005 states that it has issued Policy Letter 161 entitled *Resetting Tripped Circuit Breakers*. This initiative directs that all air operators shall develop training programs intended for crew members, maintenance personnel, and ground servicing personnel that clearly state company policies and procedures with regard to resetting tripped circuit breakers. This action taken will substantially reduce or eliminate the safety deficiency as described in Recommendation A03-05.

Therefore, the assessment is now assigned **Fully Satisfactory**.

Next TSB Action (23 June 2006)

As the safety deficiency associated with Recommendation A03-05 is considered rectified, no further action is necessary.

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