



## **REASSESSMENT OF THE RESPONSE TO TSB RECOMMENDATION A13-01**

### **Requirement for lightweight flight recorder system in commercially operated aircraft not governed by CARs 605.33**

#### **Background**

The Black Sheep Aviation and Cattle Co. Ltd. turbine powered de Havilland DHC-3 Otter (registration C-GMCW, serial number 108) departed Mayo on a 94 statute mile day visual flight rules flight to the Rackla Airstrip, Yukon. At 1507 Pacific Daylight Time, approximately 19 minutes after the aircraft had left Mayo, a 406 MHz emergency locator transmitter alert was received by the Canadian Mission Control Centre. The Joint Rescue Co-ordination Centre Victoria was notified and a commercial helicopter was dispatched from Ross River, Yukon. Aircraft wreckage was located on a hillside 38 nautical miles northeast of Mayo at 1833 Pacific Daylight Time. The wheel-ski equipped aircraft had experienced a catastrophic in-flight breakup and the pilot, who was the sole occupant, had sustained fatal injuries. There was no post-impact fire. Cockpit or data recordings were not available to the investigation and the identification and communication of safety deficiencies to advance transportation safety were precluded.

The Board concluded its investigation and released report A11W0048 on 14 May 2013.

#### **TSB Recommendation A13-01 (May 2013)**

Given the combined accident statistics for CARs subparts 702, 703, and 704 operations, there is a compelling case for industry and the regulator to proactively identify hazards and manage the risks inherent in these operations. In order to manage risk effectively, they need to know why incidents happen and what the contributing safety deficiencies may be. Moreover, routine monitoring of normal operations can help these operators both improve the efficiency of their operations and identify safety deficiencies before they result in an accident. In the event that an accident does occur, recordings from lightweight flight recording systems will provide useful information to enhance the identification of safety deficiencies in the investigation.

The Board acknowledges that there are issues that will need to be resolved to facilitate the effective use of recordings from lightweight flight recording systems, including questions about the integration of this equipment in an aircraft, human resource management, and legal issues such as the restriction on the use of cockpit voice and video recordings. Nevertheless, given the potential of this technology combined with FDM to significantly improve safety, the Board believes that no effort should be spared to overcome these obstacles.

Therefore the Board recommends that

The Department of Transport work with industry to remove obstacles to and develop recommended practices for the implementation of flight data monitoring and the installation of lightweight flight recording systems by commercial operators not currently required to carry these systems.

**TSB Recommendation A13-01**

**Transport Canada's response to Recommendation A13-01 (August 2013)**

On 14 August 2013, the TSB received a response to Recommendation A13-01 from the Minister of Transport. The response identified that the Department of Transport has initiated discussions with industry during the conduct of a risk assessment (RA) to evaluate alternate approaches to flight data monitoring (FDM) in Canada, which took place earlier this year. The results of this risk assessment will be reviewed by the Civil Aviation Regulatory Committee (CARC) in fall 2013. In addition to the risk assessment, the Department intends to hold a focus group by 31 March 2014, with industry stakeholders to identify obstacles and barriers in regards to FDM to complement the results of the risk assessment and identify areas of best practices.

With respect to lightweight flight recording systems for commercial operators, the review and analysis will be incorporated with the assessment planned for cockpit voice recorders/flight data records, which is currently scheduled to begin in the year 2014-2015.

**TSB assessment of Transport Canada's response to Recommendation A13-01 (September 2013)**

Transport Canada (TC)'s response to Recommendation A13-01 contains a clear intent to begin the process of working with industry to remove obstacles and develop recommended practices for flight data monitoring systems and the use of light weight recorders. The TSB is encouraged by the measures proposes which, if fully implemented, will enable CARs Subparts 702, 703, and 704 operators to proactively identify hazards and manage the risks inherent in their operations.

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

**Transport Canada's response to Recommendation A13-01 (November 2013)**

**October 2013 Update**

Transport Canada remains on track to convene a focus group with industry by March 2014.

**February 2014 Update**

Please note that following the review of the risk assessment, the department supports the TSB's recommendation and has decided to proceed with the development of an Advisory Circular in 2015/16 to describe recommended practices regarding Flight Data Monitoring (FDM) Programs. In addition, the department will consider adding FDM principles in future regulatory initiatives/amendments, which will be consulted through focus groups at that time.

**TSB reassessment of Transport Canada's response to Recommendation A13-01 (April 2014)**

The Board notes TC's commitment to proceed with the development of an Advisory Circular and to consider adding FDM principles in future regulatory initiatives/amendments. However,

TC is silent on the issues of removing obstacles around the installation of lightweight flight data recording systems. Further, TC has not indicated how it will work with industry on these issues.

Given the paucity of information received from TC, the Board is **Unable to Assess** TC's response.

### **Transport Canada's response to Recommendation A13-01 (January 2015)**

Transport Canada continues to support this recommendation and is planning to proceed with the development of an Advisory Circular in 2015/16 to describe recommended practices regarding Flight Data Monitoring (FDM) Programs.

In addition, Transport Canada will be consulting through focus group activity to identify obstacles within Transport Canada's mandate and make recommendations for mitigation of those obstacles with respect to the installation of lightweight flight recording systems for commercial operators not required to carry these systems.

### **TSB reassessment of Transport Canada's response to Recommendation A13-01 (March 2015)**

In its response, Transport Canada has indicated proposed action in the form of an advisory circular and focus group consultation activity. The Board is encouraged by the intent of Transport Canada to work towards meeting the issues identified in the recommendation; however, the work is on-going.

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

### **Transport Canada's response to Recommendation A13-01 (November 2015)**

Transport Canada (TC) agrees that Flight Data Monitoring (FDM) would enhance airline safety in Canada. TC will prepare an issue paper providing factual information on FDM, benefits and costs and challenges to increasing the use of FDM. TC will revisit the risk assessment conducted on FDM and recommend options to the Minister.

### **TSB reassessment of Transport Canada's response to Recommendation A13-01 (March 2016)**

TC did not produce an advisory circular or conduct focus group consultation in 2015 as per its previous response. TC's revised proposed activity is to prepare an issue paper and revisit the risk assessment on FDM. However, no specific timeline was provided for the conduct of this activity. While TC is proposing some further study of the safety issue, no concrete actions are being taken to address the TSB recommendation. The Board is therefore concerned that this could lead to protracted delays as observed on numerous other recommendations.

Therefore, the Board considers the response to the recommendation to indicate **Satisfactory Intent**.

### **Transport Canada's response to Recommendation A13-01 (January 2017)**

TC agrees that FDM would enhance airline safety in Canada.

Air Canada recently joined the Aviation Safety Information Analysis and Sharing program. This, now international effort, uses FDM and other data from over 40 North American airlines to identify and address systemic issues, including airspace design and flight crew behavior, such as continuing unstabilized approaches. TC believes there are no legislative barriers to Canadian operators conducting FDM.

In 2017, TC will conduct a focus group, including representatives from the industry, to evaluate the challenges and benefits associated with widespread installation of lightweight multi-function recording devices in small aircraft. TCCA will invite the TSB to appoint an observer to this focus group.

### **TSB reassessment of Transport Canada's response to Recommendation A13-01 (March 2017)**

TC's response indicates its renewed proposal to conduct a focus group in 2017, something which it has been planning to do since 2013. However, until the focus group reaches conclusions as to the challenges and benefits associated with the installation of lightweight multi-function recording devices in small aircraft, and TC provides the TSB with its plan of action moving forward following those conclusions, it is unclear when or how the safety deficiency identified in Recommendation A13-01 will be addressed.

Therefore, the response to Recommendation A13-01 is assessed as **Unable to Assess**.

### **Transport Canada's response to Recommendation A13-01 (October 2017)**

TC agrees with the intent of the recommendation.

Due to other ministerial commitments, such as unmanned aerial vehicles (UAVs) and fatigue risk management, TC is not able to hold the planned focus group in 2017. New dates for the focus group are to be determined.

### **TSB reassessment of Transport Canada's response to Recommendation A13-01 (February 2018)**

TC has made the following undertakings to address the safety deficiency identified in Recommendation A13-01, regarding the installation of lightweight flight recording systems by commercial operators not currently required to carry these systems:

- In 2013, after conducting a risk assessment to evaluate alternate approaches to flight data monitoring (FDM), TC informed the TSB that it supported Recommendation A13-01. In 2015, TC informed the TSB that it intended to revisit this risk assessment;
- In 2013, TC informed the TSB that it would develop an Advisory Circular outlining recommended practices for FDM programs;
- In 2013, TC informed the TSB that it would incorporate its analysis and review of Recommendation A13-01 into its planned assessment for cockpit voice and flight data recorders, which was scheduled to begin in 2014-2015;
- In 2014, TC informed the TSB that it would consider adding FDM principles in future regulatory initiatives and amendments; and
- In 2015, TC informed the TSB that it would prepare an issue paper on the use of FDM, providing factual information on FDM, including its benefits, costs and challenges.

However, due to other commitments, TC did not initiate its work for any of these undertakings.

In February 2018, TC conducted a focus group with the industry to assess the challenges and benefits associated with the installation of lightweight flight recording systems on aircraft, which are not currently required to carry these systems.

However, until the focus group reaches conclusions as to the challenges and benefits associated with the installation of lightweight flight recorders in aircraft not currently required to carry them, and TC provides the TSB with its plan of action moving forward following those conclusions, it is unclear when or how the safety deficiency identified in Recommendation A13-01 will be addressed. The Board is concerned that few concrete actions have been taken to address Recommendation A13-01 and that this will result in protracted delays as observed on numerous other recommendations.

Therefore, the Board is **unable to assess** the response to the recommendation.

### **TSB reassessment of Recommendation A13-01 (May 2018)**

On 26 April 2018, the Board issued recommendation A18-01 calling upon Transport Canada to require the mandatory installation of lightweight flight recording systems by commercial operators and private operators not currently required to carry these systems. This new recommendation supercedes Recommendation A13-01. The Board urges Transport Canada to build upon the work done on Recommendation A13-01 to expedite the implementation of safety actions in response to Recommendation A18-01.

This deficiency file is **Closed**.