



Transport
Canada

Transports
Canada



TERMS OF REFERENCE (TOR)

Flight Data Recorders & Lightweight Data Recorders

FOCUS GROUP

Part II

November 6 & 7, 2018

CONTEXT

On April 26, 2018, the Transportation Safety Board of Canada (TSB) announced Recommendation A18-01, which reads as follows:

The Department of Transport require the mandatory installation of lightweight flight recording systems by commercial operators and private operators not currently required to carry these systems.

This recommendation stems from the TSB's final report relating to the fatal accident that occurred near Kelowna Airport, British Columbia, on October 13, 2016. A privately operated Cessna Citation 500 departed Kelowna Airport, British Columbia, on an instrument flight rules night flight to Calgary / Springbank Airport, Alberta. The pilot and 3 passengers were on board. Impact forces and a post-impact fire destroyed the aircraft. All of the occupants were fatally injured. No emergency call was made, and no emergency locator transmitter signal was detected.

This most recent recommendation supersedes TSB Recommendation A13-01 which reads as follows:

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.

In February 2018, Transport Canada (TC) led a focus group of representatives from the aviation industry to address recommendation A13-01. It has therefore been determined that this focus group should reconvene to discuss these developments and build upon its work to-date.

There have been numerous accidents involving small aircraft that are not required to be equipped with Flight Data Recorders (FDRs) or Lightweight Data Recorders (LDRs) under the current *Canadian Aviation Regulations* (CARs). Several TSB aviation investigation reports have referred to investigators being unable to determine the reasons why an accident occurred, due to the lack of on-board recording devices. Investigators have noted that in the absence of flight data systems it makes it challenging to reconstruct the sequence of events leading up to a particular accident or incident. As result, there have been concerns raised whether the current regulations are adequate and if this category of aircraft should be fitted with LDRs to advance aviation safety.

The recording of an aircraft condition and operation could provide additional data to reconstruct the flight profile during all stages of flight, enhancing the investigation's ability to understand and analyze accurate data during the final moments and events leading up an accident or incident. This information would be instrumental in assisting in preventing future accidents and/or incidents.

FDRs and LDRs are considered key tools in large aircraft accidents investigations and are considered the most comprehensive methods of capturing large amounts of data for accident investigation purposes. Flight recorders typically capture parameters such as time, altitude, airspeed, vertical acceleration, heading, time of each radio transmission to or from air traffic control, pitch and roll attitudes, and thrust of each engine.

In September 2018, TC will publish a Preliminary Issue and Consultation Assessment (PICA) to outline its intention exploring the potential use of FDRs and LDRs on certain categories of operators that fall outside the scope of the current flight recorder carriage requirements under the CAR. The objective of the PICA is to encourage stakeholders and invite them to participate in a focus group to discuss this issue to strengthen awareness and advance aviation safety, and to promote a transparent and efficient consultation process. The PICA form will be available on the CARAC webpage [here](#).

PURPOSE

The purpose of the Focus Group is to build upon the success and work undertaken from the initial Focus Group that held in late February 2018 and address TSB updated Recommendation A18-01 with respect to FDRs and LDRs . The focus group will discuss and evaluate policy questions, challenges and benefits associated with the potential expansion of FDR and LDR requirements for smaller commercial and private Canadian aircraft that fall outside the scope of the current flight recorder carriage requirements under the *CARs*. At this time, the scope of private operations is limited to 604 operators and not recreational aircraft. This meeting will serve as an opportunity for TC to build on the progress that has been made during ongoing engagement with the Canadian aviation industry.

Industry groups have been proactive in analyzing this issue in order to develop recommended practices on the voluntary adoption of flight data systems. TC is continuing to work with industry stakeholders to ascertain the full extent of operators that have voluntarily adopted FDM systems to date and further develop recommended practices in the adoption and installation of flight data systems.

Members of the Focus Group will be invited to provide comment, share ideas and propose alternative viable options for consideration. The Focus Group discussion will contribute recommendations and the outcome of the Focus Group will inform the development of a notice of proposed amendment.

SCOPE

The scope of the Focus Group is to discuss the potential use of FDRs and LDRs on for smaller commercial and private Canadian aircraft (private operations is limited to 604 operators and not recreational aircraft) . Focus Group members will:

1. Examine the voluntary installation of FDRs and LDRs – The focus group will examine how the voluntary approach would be successfully implemented. This could include a TC-led advisory circular and ongoing guidance to operators looking to improve their data collection. This option could potentially allow for quick implementation and would provide operators flexibility in the adoption of FDM systems, building on existing industry practices.
2. Incorporation of FDRs or LDRs into newly-manufactured aircraft – The focus group will examine how the incorporation of these devices can be successfully implemented. A

regulatory solution requiring manufacturers to incorporate FDRs/LDRs into all new generation aircraft will be examined.

The Focus Group may be provided with supporting documentation to guide discussions. TC will aim to distribute any supporting documentation in advance of the Focus Groups meeting. Any documentation provided to the Focus Group will be for the purpose of discussion and distribution will be limited to the Focus Group's membership. The documentation shall not be distributed outside of the Focus Group's membership.

DELIVERABLES

The Focus Group will produce a report, which will consist of a series of recommendations, and supporting rationale, with respect to the potential installation of FDRs and LDRs.

The Focus Group report will be provided to the Director of Policy and Regulatory Services, Civil Aviation. Focus group participants will be provided a draft version of the Report for review, and will be given time to send comments.

Once approved by Transport Canada, Civil Aviation (TCCA), the Focus Group Final Report will be made available through the CARAC Activity Reporting System.

MEMBERSHIP

Membership will consist of invited industry representatives and TC officials. In identifying industry representatives, TC recognizes that the participation and involvement of aviation industry stakeholders will contribute to the success of this initiative. TC is seeking to have membership that is representative of the implicated stakeholders in exploring the potential adoption of FDRs or LDRs by commercial operators and private operators not currently required to carry these systems. The Focus Group will consist of approximately 20 persons.

Invited industry organizations may select their own representatives. Members should be individuals with specialized technical knowledge of the subject matter.

ROLES AND RESPONSIBILITIES

Group Leader

The Focus Group Leader will be Roger Constantin, Chief Aviation Safety Policy, Civil Aviation, Transport Canada, (613) 993-4554, roger.constantin@tc.gc.ca.

The Group Leader, is responsible for:

- Managing the Focus Group activities in accordance with the Terms of Reference;
- Convening the meeting;
- Coordinating the work of the Focus Group;

- Working with the Facilitator and members of the Focus Group to prepare and distribute documents, as required; and
- Providing briefings on status of the Focus Group discussions, as required.

The Focus Group members are responsible for:

- Sharing ideas based on their professional experience;
- Providing guidance on the proposed approach;
- Providing their professional perspective on FDRs and lightweight data recorders; and
- Supporting Transport Canada in the development of recommendations to the National Civil Aviation Management Executive (NCAMX).

Group Facilitator

The Focus Group will be facilitated by Earle DePass, Transport Canada.

REPORTING

The Focus Group will report to the Director of Policy and Regulatory Services, Civil Aviation. The resulting advice will inform recommendations that will be submitted to the National Civil Aviation Management Executive (NCAMX).

The Focus Group members are responsible to report all decisions reached, unresolved issues, and planned action back to their respective organizations.

MEETING TIMES AND LOCATION

The Focus Group meeting will consist of a two-day meeting session to be held in Ottawa on November 6th and 7th, 2018.

Time of the meeting: 9:00 am to 4:30 pm.

Location of the meeting: John G. Diefenbaker Building at 111 Sussex Drive, Ottawa, Ontario, in the *British Columbia Room*.

Unless arrangements have been made with the Focus Group Leader, it is expected that all participants will attend the full meeting.

BUDGET

Costs incurred with the Focus Group members travel, accommodations, meals and incidental expenses shall be borne by their respective organizations. TCCA – Policy and Regulatory Services Branch will be responsible for providing meeting facilities and secretarial functions in addition to all necessary administrative support. The undersigned approve these Terms of Reference.

Signature on file

Patrick Juneau
Director, Policy & Regulatory Services
Civil Aviation

Date: _____

Signature on file

Nicholas Robinson
Director General,
Civil Aviation

Date: _____