



<http://www.faa.gov/aircraft/safety/alerts/SAIB>

**SAIB: NM-07-26**  
*Date: April 5, 2007*

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*This is information only. Recommendations aren't mandatory.*

## **Introduction**

The Special Airworthiness Information Bulletin (SAIB) advises you, owners and operators of the **Bombardier Inc. Model CL 600-2B19 (CRJ-100/200/440) aircraft** that operators have reported numerous incidents of flap failures during cold weather operations. Water ingress into flap system components with subsequent freezing appears to be a significant factor. Bombardier has an on going engineering investigation to address the root causes of this issue.

## **Background**

In addition to fuel shortage and landing distance issues, there could potentially be an obstacle clearance and climb performance issues.

While the root cause of the flap failures are being investigated, Bombardier has issued an All Operator's Message (AOM) 1047 dated March 12, 2007, (attached) in order to provide some mitigating operational guidance for Flap failure scenarios. We have determined that an AD is not warranted at this time.

## **Recommendations**

We strongly recommend that CRJ operators are informed of the attached Bombardier AOM and review its content.

## **For Further Information Contact**

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## Bombardier Regional Jet Series All Operator Message No. 1047

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ATTN: Director/Manager of: Maintenance  
Engineering  
Quality Control  
Flight Operations  
Procurement/Spares

DATE: 12 Mar 07

ATA: 2750 MODEL: CL-600-2B19

SUBJECT: Flap System Availability Considerations

The following message is being sent to all Bombardier CRJ Operators and Bombardier Aerospace Field Service Representatives.

This message contains information requiring attention and/or action. Please ensure timely and appropriate distribution within maintenance and flight operations departments.

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### DISCUSSION:

This AOM is intended to renew awareness to the Operators on some of the potential risks that could be encountered following the occurrence of a flap failure, in particular fuel and runway requirements.

As previously reported in AOM 1020, a recent flaps failure occurrence resulted in a fuel shortage on landing. The crew executed a missed approach due to weather conditions at the destination airport. During the missed approach, the flaps could not be retracted from the 45-degree position. The crew began a diversion to their alternate airport, and declared a fuel emergency due to fuel consumption calculations. An airport slightly closer than the alternate was selected, and the aircraft landed safely with approximately 500 lbs of fuel remaining.

There have also been a number of reported cases of flap system malfunctions where the flaps either do not extend at all or fail to extend significantly out of the 0 degree position. Fleet data shows that the rate of occurrence of these events increases during operation in cold temperatures. The increased frequency of these events is the subject of a detailed Bombardier and system supplier investigation. In the interim, flight crews should be aware of the possibility of these kinds of events.

Operations to remote or runway limited airfields, or operations involving wet or contaminated runways may have to be reviewed and guidance provided to the crews to ensure that the risks of flap failures have been mitigated.

Operators should verify that their flight crew members are provided with the appropriate information, such as that found in the Performance section of QRH Vol. 1 and associated training, with emphasis on decision-making and performance considerations for these situations. Issues such as night operations and/or early closure of some airports, due to reduced business volume, may reduce the availability of some potential diversion airports.

Bombardier Aerospace is addressing the flap system issue from a technical point of view with the purpose of increasing the overall system reliability and, specifically, reducing cold temperature related system faults.

BA have initiated a complete flap system review involving a multi-disciplinary team including Bombardier, the system supplier Eaton Aerospace, and a representative group of operators. The team will review all aspects of the system, examine all known modes of system malfunction, especially related to cold, and develop a short-term mitigation plan as well as a medium-to-longer term system improvement package to actively address cold weather system reliability.

The group will target release of recommendations for short-term action to allow for incorporation by Sept/Oct 2007, with more detailed, long-term change recommendations to follow.

Please direct responses and inquiries to your Bombardier Aerospace Field Service Representative or the Technical Help Desk in Montreal at telephone (514) 855-8500 or facsimile (514) 855-8501 or e-mail: [thd.cri@aero.bombardier.com](mailto:thd.cri@aero.bombardier.com)

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