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## **DEPARTMENT OF TRANSPORTATION**

### **Federal Aviation Administration**

#### **14 CFR Part 39**

**[Docket No. FAA-2010-0515; Directorate Identifier 2009-NM-196-AD; Amendment 39-16776; AD 2011-17-12]**

**RIN 2120-AA64**

**Airworthiness Directives; Bombardier, Inc. Model CL-600-2C10 (Regional Jet Series 700, 701 & 702), Model CL-600-2D15 (Regional Jet Series 705), and Model CL-600-2D24 (Regional Jet Series 900) Airplanes**

**AGENCY:** Federal Aviation Administration (FAA), Department of Transportation (DOT).

**ACTION:** Final rule.

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**SUMMARY:** We are adopting a new airworthiness directive (AD) for the products listed above. This AD results from mandatory continuing airworthiness information (MCAI) originated by an aviation authority of another country to identify and correct an unsafe condition on an aviation product. The MCAI describes the unsafe condition as:

Several cases have been reported of cracks in the joint extrusions securing the outer bondment to the acoustic panel of the nacelle transcowling assemblies. Although there is no effect on flight safety (thrust reverser stowed), thrust reverser deployment under rejected take-off or emergency landing load conditions could potentially result in acoustic panel failure and possible runway debris.

\* \* \* \* \*

The loss of an acoustic panel during rejected take-off or emergency landing load conditions could leave debris on the runway. This debris, if not removed, creates an unsafe condition for other airplanes during take-off or landing, as those airplanes could impact debris on the runway and sustain damage. We are issuing this AD to require actions to correct the unsafe condition on these products.

**DATES:** This AD becomes effective September 26, 2011.

The Director of the Federal Register approved the incorporation by reference of certain publications listed in this AD as of September 26, 2011.

**ADDRESSES:** You may examine the AD docket on the Internet at <http://www.regulations.gov> or in person at the U.S. Department of Transportation, Docket Operations, M-30, West Building Ground Floor, Room W12-140, 1200 New Jersey Avenue SE., Washington, DC.

**FOR FURTHER INFORMATION CONTACT:** Craig Yates, Aerospace Engineer, Airframe and Mechanical Systems Branch, ANE-171, FAA, New York Aircraft Certification Office, 1600 Stewart Avenue, Suite 410, Westbury, New York 11590; telephone (516) 228-7355; fax (516) 794-5531.

## **SUPPLEMENTARY INFORMATION:**

### **Discussion**

We issued a supplemental notice of proposed rulemaking (NPRM) to amend 14 CFR part 39 to include an AD that would apply to the specified products. That supplemental NPRM was published in the Federal Register on April 6, 2011 (76 FR 18957). That supplemental NPRM proposed to correct an unsafe condition for the specified products. The MCAI states:

Several cases have been reported of cracks in the joint extrusions securing the outer bondment to the acoustic panel of the nacelle transcowl assemblies. Although there is no effect on flight safety (thrust reverser stowed), thrust reverser deployment under rejected take-off or emergency landing load conditions could potentially result in acoustic panel failure and possible runway debris.

This [Canadian] directive mandates inspection, repair (if necessary) and reinforcement of the transcowl assemblies.

The loss of an acoustic panel during rejected take-off or emergency landing load conditions could leave debris on the runway. This debris, if not removed, creates an unsafe condition for other airplanes during take-off or landing, as those airplanes could impact debris on the runway and sustain damage. The inspection is a detailed visual inspection of the outboard edge of the transcowl joint extrusion for evidence of cracking. The repair consists of doing an eddy current or liquid penetrant inspection for cracking, and depending on the results, either removing the affected joint extrusion area and replacing with packers, or contacting Bombardier for repair instructions and doing the repair. The reinforcement of the transcowl assemblies includes installing new support channels. You may obtain further information by examining the MCAI in the AD docket.

### **Comments**

We gave the public the opportunity to participate in developing this AD. We considered the comments received.

### **Request To Allow for Records Review**

American Eagle Airlines (AEA) requested that we revise the supplemental NPRM to allow operators to perform a records review in lieu of the inspection for part number, serial number, and repair status of each transcowl assembly, as required by paragraph (g) of the supplemental NPRM. AEA did not provide reasoning for this request.

We agree to allow operators to perform a records review in lieu of the inspection for part number, serial number, and repair status of each transcowl assembly. We have determined that a review of airplane maintenance records is acceptable in lieu of the inspection, if the part number, serial number, and repair status of each transcowl assembly can be conclusively determined from that review. We have revised paragraph (g) of the final rule accordingly.

## **Request To Revise Paragraph (g)(1) of the Supplemental NPRM**

AEA requested that we revise paragraph (g)(1) of the supplemental NPRM to remove the reference to paragraph (h) of the supplemental NPRM. AEA explained that the transcowls specified in paragraph (g)(1) of the supplemental NPRM are post-modified transcowls and do not need the inspections required by paragraph (h) of the supplemental NPRM. AEA reasoned that paragraph (h) of the supplemental NPRM should not apply to airplanes that have met the conditions specified in paragraph (g)(1)(i), (g)(1)(ii), or (g)(1)(iii) of the supplemental NPRM.

We agree to revise paragraph (g)(1) of the final rule to remove reference to paragraph (h) of the final rule. We have determined that only paragraph (k) of the final rule applies to post-modification transcowls. We have revised paragraph (g)(1) of the final rule accordingly.

## **Conclusion**

We reviewed the available data, including the comment received, and determined that air safety and the public interest require adopting the AD with the changes described previously. We determined that these changes will not increase the economic burden on any operator or increase the scope of the AD.

## **Differences Between This AD and the MCAI or Service Information**

We have reviewed the MCAI and related service information and, in general, agree with their substance. But we might have found it necessary to use different words from those in the MCAI to ensure the AD is clear for U.S. operators and is enforceable. In making these changes, we do not intend to differ substantively from the information provided in the MCAI and related service information.

We might also have required different actions in this AD from those in the MCAI in order to follow our FAA policies. Any such differences are highlighted in a Note within the AD.

## **Costs of Compliance**

We estimate that this AD will affect 361 products of U.S. registry. We also estimate that it will take about 8 work-hours per product to comply with the basic requirements of this AD. The average labor rate is \$85 per work-hour. Required parts will cost about \$0 per product. Where the service information lists required parts costs that are covered under warranty, we have assumed that there will be no charge for these parts. As we do not control warranty coverage for affected parties, some parties may incur costs higher than estimated here. Based on these figures, we estimate the cost of this AD to the U.S. operators to be \$245,480, or \$680 per product.

In addition, we estimate that any necessary follow-on actions would take between 4 and 8 work-hours and require parts costing \$0, for a cost between \$340 and \$680 per product. We have no way of determining the number of products that may need these actions.

## **Authority for This Rulemaking**

Title 49 of the United States Code specifies the FAA's authority to issue rules on aviation safety. Subtitle I, section 106, describes the authority of the FAA Administrator. "Subtitle VII: Aviation Programs," describes in more detail the scope of the Agency's authority.

We are issuing this rulemaking under the authority described in "Subtitle VII, Part A, Subpart III, Section 44701: General requirements." Under that section, Congress charges the FAA with promoting safe flight of civil aircraft in air commerce by prescribing regulations for practices, methods, and procedures the Administrator finds necessary for safety in air commerce. This regulation is within the

scope of that authority because it addresses an unsafe condition that is likely to exist or develop on products identified in this rulemaking action.

## **Regulatory Findings**

We determined that this AD will not have federalism implications under Executive Order 13132. This AD will not have a substantial direct effect on the States, on the relationship between the national government and the States, or on the distribution of power and responsibilities among the various levels of government.

For the reasons discussed above, I certify this AD:

1. Is not a "significant regulatory action" under Executive Order 12866;
2. Is not a "significant rule" under the DOT Regulatory Policies and Procedures (44 FR 11034, February 26, 1979); and
3. Will not have a significant economic impact, positive or negative, on a substantial number of small entities under the criteria of the Regulatory Flexibility Act.

We prepared a regulatory evaluation of the estimated costs to comply with this AD and placed it in the AD docket.

## **Examining the AD Docket**

You may examine the AD docket on the Internet at <http://www.regulations.gov>; or in person at the Docket Operations office between 9 a.m. and 5 p.m., Monday through Friday, except Federal holidays. The AD docket contains the NPRM, the regulatory evaluation, any comments received, and other information. The street address for the Docket Operations office (telephone (800) 647-5527) is in the ADDRESSES section. Comments will be available in the AD docket shortly after receipt.

## **List of Subjects in 14 CFR Part 39**

Air transportation, Aircraft, Aviation safety, Incorporation by reference, Safety.

## **Adoption of the Amendment**

Accordingly, under the authority delegated to me by the Administrator, the FAA amends 14 CFR part 39 as follows:

### **PART 39—AIRWORTHINESS DIRECTIVES**

1. The authority citation for part 39 continues to read as follows:

Authority: 49 U.S.C. 106(g), 40113, 44701.

#### **§ 39.13 [Amended]**

2. The FAA amends § 39.13 by adding the following new AD:



**2011-17-12 Bombardier, Inc.:** Amendment 39-16776. Docket No. FAA-2010-0515; Directorate Identifier 2009-NM-196-AD.

**Effective Date**

(a) This airworthiness directive (AD) becomes effective September 26, 2011.

**Affected ADs**

(b) None.

**Applicability**

(c) This AD applies to the airplanes identified in paragraphs (c)(1) and (c)(2) of this AD, certificated in any category.

(1) Bombardier, Inc. Model CL-600-2C10 (Regional Jet Series 700, 701, & 702) airplanes, serial numbers 10003 through 10265 inclusive.

(2) Bombardier, Inc. Model CL-600-2D15 (Regional Jet Series 705) and Model CL-600-2D24 (Regional Jet Series 900) airplanes, serial numbers 15001 through 15192 inclusive.

**Subject**

(d) Air Transport Association (ATA) of America Code 78: Engine exhaust.

**Reason**

(e) The mandatory continuing airworthiness information (MCAI) states:

Several cases have been reported of cracks in the joint extrusions securing the outer bondment to the acoustic panel of the nacelle transcowling assemblies. Although there is no effect on flight safety (thrust reverser stowed), thrust reverser deployment under rejected take-off or emergency landing load conditions could potentially result in acoustic panel failure and possible runway debris.

\* \* \* \* \*

The loss of an acoustic panel during rejected take-off or emergency landing load conditions could leave debris on the runway. This debris, if not removed, creates an unsafe condition for other airplanes during take-off or landing, as those airplanes could impact debris on the runway and sustain damage.

**Compliance**

(f) You are responsible for having the actions required by this AD performed within the compliance times specified, unless the actions have already been done.

## Inspection, Repair, and Reinforcement

(g) Within 5,000 flight hours or 24 months after the effective date of this AD, whichever occurs first, inspect for the part number and serial number of each transcowl assembly, and, as applicable, the repair status of each transcowl assembly. A review of airplane maintenance records is acceptable in lieu of this inspection if the part number and serial number of each transcowl assembly, and, as applicable, the repair status of each transcowl assembly can be conclusively determined from that review.

(1) If all transcowl assemblies installed on any airplane meet one of the conditions listed in paragraph (g)(1)(i), (g)(1)(ii), or (g)(1)(iii) of this AD, no further action is required by this AD, except paragraph (k) of this AD must be complied with.

(i) Having part number (P/N) KCN624-2003-3, -4, -5, -6, -7, or -8, as listed in Bombardier Service Bulletin 670SH-78-029, Revision C, dated November 10, 2010.

(ii) Having P/Ns CN624-2001-XXX or KCN624-2001-X (XXX and X mean various dash numbers), with serial number (S/N) SB0965 or higher.

(iii) Having P/Ns CN624-2001-XXX or KCN624-2001-X (XXX and X mean various dash numbers), and repaired in accordance with one of the Bombardier repair engineering orders (REOs) listed in paragraph 1.D. of Bombardier Service Bulletin 670BA-78-008, Revision B, dated December 22, 2010; or paragraph 1.A. of Bombardier Service Bulletin 670SH-78-029, Revision C, dated November 10, 2010.

(2) If one or more of the transcowl assemblies have P/N CN624-2001-XXX or KCN624-2001-X (XXX and X mean various dash numbers), with S/N SB0964 or lower, and have not been repaired in accordance with one of the Bombardier REOs listed in paragraph 1.D. of Bombardier Service Bulletin 670BA-78-008, Revision B, dated December 22, 2010; or paragraph 1.A. of Bombardier Service Bulletin 670SH-78-029, Revision C, dated November 10, 2010; do the actions specified in paragraph (i) of this AD.

(h) As of the effective date of this AD, if any high-energy stop occurs and the thrust reversers are deployed above 68% N1, or if a rejected take-off (RTO) occurs and the thrust reversers are deployed above 68% N1: Perform a detailed inspection for cracks of each transcowl assembly (left, right, upper, and lower) before further flight, by doing the actions specified in paragraphs (h)(1), (h)(2), and (h)(3) of this AD. Doing the requirements of paragraph (i) of this AD terminates the requirements of paragraph (h) of this AD.

(1) Open the cowling on the left and right engines.

(2) Do a detailed inspection for cracks of the joint extrusion of the upper and lower transcowl assembly on the left and right engines at the location of the joint piece. If no cracks are found, close the cowlings on the left and right engines.

(3) If any crack is found on one or more transcowl assemblies during the inspection required by paragraph (h)(2) of this AD, before further flight, repair and reinforce the cracked part(s) in accordance with paragraph (i)(1) of this AD.

Note 1: Procedure—Part 3 of Task 05-51-27-210-801 of Chapter 05, Part 2, Volume 1, of the Bombardier CRJ Series Regional Jet Aircraft Maintenance Manual (AMM), CSP B-001, Revision 34, dated November 20, 2010, provides guidance for opening and closing the cowling on the left and right engines.

(i) For transcowl assemblies identified in paragraph (g)(2) of this AD: Except as required by paragraph (h) of this AD, within 5,000 flight hours or 24 months after the effective date of this AD, whichever comes first, do a detailed inspection for cracking on each transcowl assembly, in accordance with the Accomplishment Instructions of Bombardier Service Bulletin 670BA-78-008, Revision B, dated December 22, 2010; or Bombardier Service Bulletin 670SH-78-029, Revision C, dated November 10, 2010. Accomplishment of the actions specified in paragraph (i)(1) or (i)(2) of

this AD for all transcowl assemblies identified in paragraph (g)(2) of this AD terminates the requirements of paragraph (h) of this AD.

(1) If any cracking of the joint extrusion is found, before further flight, repair and reinforce the joint extrusion on each transcowl assembly, in accordance with the Accomplishment Instructions of Bombardier Service Bulletin 670BA-78-008, Revision B, dated December 22, 2010; or Bombardier Service Bulletin 670SH-78-029, Revision C, dated November 10, 2010.

(2) If no cracking is found, before further flight, reinforce the joint extrusion on each transcowl assembly, in accordance with the Accomplishment Instructions of Bombardier Service Bulletin 670BA-78-008, Revision B, dated December 22, 2010; or Bombardier Service Bulletin 670SH-78-029, Revision C, dated November 10, 2010.

**Credit for Actions Accomplished in Accordance With Previous Service Information**

(j) Inspections, repairs, and reinforcement of the joint extrusion on each transcowl is also acceptable for compliance with the corresponding requirements of paragraph (i) of this AD if done before the effective date of this AD in accordance with the service information listed in table 1 of this AD.

**Table 1–Credit Service Information**

<b>Document</b>	<b>Revision</b>	<b>Date</b>
Bombardier Service Bulletin 670BA-78-008	Original	September 19, 2008
Bombardier Service Bulletin 670BA-78-008	A	July 10, 2009
Bombardier Service Bulletin 670SH-78-029	Original	July 3, 2008
Bombardier Service Bulletin 670SH-78-029	A	June 30, 2009
Bombardier Service Bulletin 670SH-78-029	B	November 25, 2009

**Parts Installation**

(k) As of the effective date of this AD, no replacement or spare transcowl assembly having P/N CN624-2001-XXX or KCN624-2001-X (XXX and X mean various dash numbers), with S/N SB0964 or lower, may be installed on any airplane, except for a transcowl assembly on which any repair listed in paragraph 1.D. of Bombardier Service Bulletin 670BA-78-008, Revision B, dated December 22, 2010, or paragraph 1.A. of Bombardier Service Bulletin 670SH-78-029, Revision C, dated November 10, 2010, has been done; and except for a transcowl that has been inspected as specified in paragraph (i) of this AD and all applicable actions specified in paragraph (i)(1) or (i)(2) of this AD, as applicable, have been done.

**FAA AD Differences**

Note 2: This AD differs from the MCAI and/or service information as follows: No differences.

**Other FAA AD Provisions**

(l) The following provisions also apply to this AD:

(1) Alternative Methods of Compliance (AMOCs): The Manager, New York Aircraft Certification Office, ANE-170, FAA, has the authority to approve AMOCs for this AD, if requested using the procedures found in 14 CFR 39.19. In accordance with 14 CFR 39.19, send your request to your principal inspector or local Flight Standards District Office, as appropriate. If sending

information directly to the NYACO, send it to ATTN: Program Manager, Continuing Operational Safety, 1600 Stewart Avenue, Suite 410, Westbury, New York 11590; telephone 516-228-7300; fax 516-794-5531. Before using any approved AMOC, notify your appropriate principal inspector, or lacking a principal inspector, the manager of the local flight standards district office/certificate holding district office. The AMOC approval letter must specifically reference this AD.

(2) Airworthy Product: For any requirement in this AD to obtain corrective actions from a manufacturer or other source, use these actions if they are FAA-approved. Corrective actions are considered FAA-approved if they are approved by the State of Design Authority (or their delegated agent). You are required to assure the product is airworthy before it is returned to service.

### **Related Information**

(m) Refer to MCAI Canadian Airworthiness Directive CF-2009-33, dated July 28, 2009; Bombardier Service Bulletin 670BA-78-008, Revision B, dated December 22, 2010; and Bombardier Service Bulletin 670SH-78-029, Revision C, dated November 10, 2010; for related information.

### **Material Incorporated by Reference**

(n) You must use Bombardier Service Bulletin 670BA-78-008, Revision B, dated December 22, 2010; and Bombardier Service Bulletin 670SH-78-029, Revision C, dated November 10, 2010; as applicable; to do the actions required by this AD, unless the AD specifies otherwise.

(1) The Director of the Federal Register approved the incorporation by reference of this service information under 5 U.S.C. 552(a) and 1 CFR part 51.

(2) For service information identified in this AD, contact Bombardier, Inc., 400 Côte-Vertu Road West, Dorval, Québec H4S 1Y9, Canada; telephone 514-855-5000; fax 514-855-7401; e-mail [thd.crj@aero.bombardier.com](mailto:thd.crj@aero.bombardier.com); Internet <http://www.bombardier.com>.

(3) You may review copies of the service information at the FAA, Transport Airplane Directorate, 1601 Lind Avenue, SW., Renton, Washington. For information on the availability of this material at the FAA, call 425-227-1221.

(4) You may also review copies of the service information that is incorporated by reference at the National Archives and Records Administration (NARA). For information on the availability of this material at NARA, call 202-741-6030, or go to: [http://www.archives.gov/federal\\_register/code\\_of\\_federal\\_regulations/ibr\\_locations.html](http://www.archives.gov/federal_register/code_of_federal_regulations/ibr_locations.html).

Issued in Renton, Washington, on August 8, 2011.

Ali Bahrami,  
Manager, Transport Airplane Directorate,  
Aircraft Certification Service.