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**DEPARTMENT OF TRANSPORTATION**

**Federal Aviation Administration**

**14 CFR Part 39**

**[Docket No. FAA-2009-0656; Directorate Identifier 2009-NM-038-AD; Amendment 39-16056; AD 2009-22-05]**

**RIN 2120-AA64**

**Airworthiness Directives; Bombardier, Inc. Model CL-600-2B19 (Regional Jet Series 100 & 440) Airplanes**

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

**ACTION:** Final rule.

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**SUMMARY:** We are superseding an existing 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:

There have been several cases of wing leading edge anti-ice piccolo duct failure reported on CL-600-2B19 (CRJ) aircraft. Upon investigation, it was determined that ducts manufactured since May 2000 are susceptible to cracking due to the process used to drill holes in the ducts. This cracking may cause air leakage, with a possible adverse effect on the anti-ice air distribution pattern and anti-ice capability, without annunciation to the flight crew [and consequent reduced controllability of the airplane].

\* \* \* \* \*

It has subsequently been determined that faulty ducts may also have been installed in a number of leading edge assemblies built as spares and whose current locations are not specifically known. \* \* \*

\* \* \* \* \*

We are issuing this AD to require actions to correct the unsafe condition on these products.

**DATES:** This AD becomes effective April 15, 2010.

The Director of the Federal Register approved the incorporation by reference of certain publications listed in this AD as of April 15, 2010.

On December 1, 2008 (73 FR 67363, November 14, 2008), the Director of the Federal Register previously approved the incorporation by reference of certain publications listed in this AD.

On September 7, 2005 (70 FR 49164, August 23, 2005), the Director of the Federal Register previously approved the incorporation by reference of certain other publications listed in this AD.

**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:** Fabio Buttitta, 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) 228-7303; fax (516) 794-5531.

## **SUPPLEMENTARY INFORMATION:**

### **Discussion**

We issued a notice of proposed rulemaking (NPRM) to amend 14 CFR part 39 to include an AD that would apply to the specified products. That NPRM was published in the Federal Register on July 24, 2009 (74 FR 36628), and proposed to supersede AD 2008-23-16, Amendment 39-15737 (73 FR 67363, November 14, 2008). That NPRM proposed to correct an unsafe condition for the specified products.

The preamble to AD 2008-23-16 explains that we consider those requirements "interim action" and were considering further rulemaking. We now have determined that further rulemaking is indeed necessary to require the previously optional terminating action, and this AD follows from that determination. Transport Canada Civil Aviation (TCCA), which is the aviation authority for Canada, previously issued Canadian Airworthiness Directive CF-2008-30, dated October 7, 2008 (referred to after this as "the MCAI"), to correct an unsafe condition for the specified products.

The unsafe condition is cracked piccolo ducts, which could result in air leakage, a possible adverse effect on the anti-ice distribution pattern and anti-ice capability without annunciation to the flight crew, and consequent reduced controllability of the airplane. Required actions include revising the airplane flight manual, inspecting to determine if certain anti-ice piccolo ducts are installed, and replacing or repairing the piccolo duct if necessary. 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 received no comments on the NPRM or on the determination of the cost to the public.

### **Explanation of Changes Made to the AD**

We have revised this AD to identify the legal name of the manufacturer as published in the most recent type certificate data sheet for the affected airplane models.

We have revised paragraph (j)(5) of this AD to remove reference to Master Minimum Equipment List (MMEL) Entry 30-12-03. However, we have approved operation of the airplane according to MMEL Entry 30-12-03 as a method for complying with the requirements of paragraph (j)(5) of this AD. Operators may contact the Manager, New York ACO, ANE-170, for information regarding the use of MMEL Entry 30-12-03 for compliance with the requirements of paragraph (j)(5) of this AD. We have included a new Note 1 in this AD to specify that guidance on operating the airplane under certain conditions according to the MMEL can be found in MMEL Entry 30-12-03, and have renumbered subsequent notes accordingly.

## **Conclusion**

We reviewed the available data 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.

## **Explanation of Change to Costs of Compliance**

Since issuance of the NPRM, we have increased the labor rate used in the Costs of Compliance from \$80 per work-hour to \$85 per work-hour. The Costs of Compliance information, below, reflects this increase in the specified hourly labor rate.

## **Costs of Compliance**

We estimate that this AD will affect about 711 products of U.S. registry.

The actions that are required by AD 2008-23-16 and retained in this AD take about 3 work-hours per product, at an average labor rate of \$85 per work hour. Required parts cost about \$0 per product. Based on these figures, the estimated cost of the currently required actions is \$181,305, or \$255 per product.

We estimate that it will take about 12 work-hours per product to comply with the new 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 costs. 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 \$725,220, or \$1,020 per product.

## **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 removing Amendment 39-15737 (73 FR 67363, November 14, 2008) and adding the following new AD:



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**2009-22-05 Bombardier, Inc.:** Amendment 39-16056. Docket No. FAA-2009-0656; Directorate Identifier 2009-NM-038-AD.

**Effective Date**

- (a) This airworthiness directive (AD) becomes effective April 15, 2010.

**Affected ADs**

- (b) This AD supersedes AD 2008-23-16, Amendment 39-15737.

**Applicability**

(c) This AD applies to Bombardier, Inc. Model CL-600-2B19 (Regional Jet Series 100 & 440) airplanes, certificated in any category; serial numbers (S/Ns) 7003 through 7067 inclusive, 7069 through 7990 inclusive, 8000 through 8076 inclusive, 8082, 8086, 8090 through 8092 inclusive, 8096, and 8097.

**Subject**

- (d) Air Transport Association (ATA) of America Code 30: Ice and rain protection.

**Reason**

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

"There have been several cases of wing leading edge anti-ice piccolo duct failure reported on CL-600-2B19 (CRJ) aircraft. Upon investigation, it was determined that ducts manufactured since May 2000 are susceptible to cracking due to the process used to drill holes in the ducts. This cracking may cause air leakage, with a possible adverse effect on the anti-ice air distribution pattern and anti-ice capability, without annunciation to the flight crew [and consequent reduced controllability of the airplane].

The faulty ducts were installed on aircraft SN 7417 through 7990 and 8000 through 8055 in production, and as replacement parts on in service aircraft SN 7014, 7017, 7037, 7046, 7059, 7076, 7105, 7127, 7151, 7157, 7163, 7179, 7203, 7228, 7271, 7347, 7359, 7362, 7378 and 7381. Service Bulletin (SB) 601R-30-029, Revision B and AD CF-2005-26R1 previously covered the above aircraft serial numbers.

It has subsequently been determined that faulty ducts may also have been installed in a number of leading edge assemblies built as spares and whose current locations are not specifically known. As they may have been installed on any of the aircraft serial numbers in the Applicability section of this directive, checking of records and/or inspection \* \* \* is now required for all applicable aircraft.

"This directive, which supersedes and cancels AD CF-2005-26R1 [which corresponds to FAA AD 2005-17-12, amendment 39-14223], mandates the amendment of the Airplane Flight Manual (AFM) procedures, in addition to checking the part numbers and serial numbers of installed and spare wing anti-ice piccolo ducts, as required, and inspecting, replacing or repairing them as necessary. Terminating action is also introduced."

Required actions include revising the airplane flight manual, inspecting to determine if certain anti-ice piccolo ducts are installed, and replacing or repairing the piccolo duct if necessary.

## **Restatement of Requirements of AD 2005-17-12**

### **Identification of Affected Piccolo Tubes**

(f) Unless already done, for airplanes having S/Ns 7013, 7017, 7037, 7046, 7059, 7076, 7105, 7127, 7151, 7157, 7163, 7174, 7179, 7203, 7204, 7228, 7271, 7347, 7362, 7378, 7417 through 7990 inclusive, 8000 through 8076 inclusive, 8082, 8086, 8090 through 8092 inclusive, 8096 and 8097: Before the airplane accumulates 3,000 total flight hours, or within 14 days after September 7, 2005 (the effective date of AD 2005-17-12, which was superseded by AD 2008-23-16), whichever occurs later, determine whether any affected piccolo tube is installed on the airplane. Affected piccolo tubes are identified in paragraph 1.A. of Bombardier Service Bulletin 601R-30-029, Revision A, dated July 7, 2005. Doing the action required by paragraph (p), (q), (r), (w), or (y) of this AD terminates the requirements of this paragraph.

### **Revision to Airplane Flight Manual (AFM)**

(g) Unless already done, for airplanes with an affected or unidentifiable piccolo tube found during the action required by paragraph (f) of this AD: Before the airplane accumulates 3,000 total flight hours, or within 14 days after September 7, 2005, whichever occurs later, revise the Operating Limitations and Abnormal Procedures sections of the Canadair Regional Jet AFM, CSP A-012, to include the information in Canadair Temporary Revision (TR) RJ/155, dated July 5, 2005, as specified in the TR. This may be done by inserting a copy of the TR into the AFM. This TR introduces new procedures for operation in icing conditions. Operate the airplane according to the limitations and procedures in the TR except as required by paragraph (n) of this AD. When this TR has been included in general revisions of the AFM, the general revisions may be inserted in the AFM, provided the relevant information in the general revision is identical to that in the TR. After the AFM revision required by paragraph (n) of this AD has been done, remove the AFM limitation specified in this paragraph.

### **Optional Inspections**

(h) Unless already done, for airplanes with an affected or unidentifiable piccolo tube found during the action required by paragraph (f) of this AD: The operating limitations and abnormal procedures specified in Canadair TR RJ/155, dated July 5, 2005, as required by paragraph (g) of this AD, may be removed from the AFM, provided all requirements of this paragraph have been satisfied.

(1) A fluorescent dye penetrant inspection for cracks of the piccolo tubes is done and repeated thereafter within 2,000-flight-hour intervals in accordance with the Accomplishment Instructions of Bombardier Service Bulletin 601R-30-029, Revision A, dated July 7, 2005. An inspection done before September 7, 2005, in accordance with Bombardier Service Bulletin 601R-30-029, dated June 17, 2005, is acceptable for compliance with the requirements of paragraph (h)(1) of this AD. Doing the inspection required by paragraph (u) of this AD terminates the actions required by this paragraph.

(2) All applicable corrective actions are done as specified in paragraph (j) of this AD.

### **AFM Limitations Required for Exceeding Inspection Interval**

(i) Unless already done, for airplanes having S/Ns 7013, 7017, 7037, 7046, 7059, 7076, 7105, 7127, 7151, 7157, 7163, 7174, 7179, 7203, 7204, 7228, 7271, 7347, 7362, 7378, 7417 through 7990 inclusive, 8000 through 8076 inclusive, 8082, 8086, 8090 through 8092 inclusive, 8096 and 8097: During any period in which the inspection interval exceeds 2,000 flight hours after the initial inspection specified in paragraph (h)(1) of this AD, the airplane must be operated under the limitations and abnormal procedures specified in paragraph (g) of this AD. Doing the action required by paragraph (p), (q), (r), (w), or (y) of this AD terminates the requirements of this paragraph.

### **Corrective Action**

(j) Unless already done, if any crack is found during any inspection required by paragraph (h) of this AD: Before further flight, do the actions specified in paragraph (j)(1), (j)(2), (j)(3), (j)(4), or (j)(5) of this AD, except as required by paragraph (k) of this AD.

(1) Replace the cracked piccolo tube, in accordance with the Accomplishment Instructions of Bombardier Service Bulletin 601R-30-029, Revision A, dated July 7, 2005, with a new piccolo tube that has the same part number as identified in paragraph 1.A. of Bombardier Service Bulletin 601R-30-029, Revision A, dated July 7, 2005, but that does not have a serial number listed in that paragraph.

(2) Replace the cracked piccolo tube, in accordance with the Accomplishment Instructions of Bombardier Service Bulletin 601R-30-029, Revision A, dated July 7, 2005, with a new piccolo tube that has a part number identified in the applicable Bombardier illustrated parts catalog but not identified in paragraph 1.A. of Bombardier Service Bulletin 601R-30-029, Revision A, dated July 7, 2005, or with a new piccolo tube identified in paragraph (1) of this AD.

(3) Replace the cracked piccolo tube, in accordance with the Accomplishment Instructions of Bombardier Service Bulletin 601R-30-029, Revision A, dated July 7, 2005, with a piccolo tube that has been inspected in accordance with the Accomplishment Instructions of Bombardier Service Bulletin 601R-30-029, Revision A, dated July 7, 2005, is not cracked, and has not accumulated any air time (hours time-in-service) since inspection.

(4) Replace the cracked piccolo tube with a piccolo tube that has been repaired in accordance with a method approved by either the Manager, New York Aircraft Certification Office (ACO), ANE-172, FAA; or Transport Canada Civil Aviation (TCCA) (or its delegated agent); and has not accumulated any air time (hours time-in-service) since the repair.

(5) Reinstall the cracked piccolo tube and operate the airplane in accordance with a method approved by either the Manager, New York ACO, or TCCA (or its delegated agent).

Note 1: Guidance on operating the airplane under certain conditions in accordance with the provisions of the Master Minimum Equipment List (MMEL) can be found in MMEL Entry 30-12-03.

### **Exception to Service Bulletin Procedures**

(k) Unless already done: Where Bombardier Service Bulletin 601R-30-029, Revision A, dated July 7, 2005, specifies that Bombardier may be contacted for information regarding repair, this AD requires repair according to a method approved by either the Manager, New York ACO, or TCCA (or its delegated agent).

## **Optional Terminating Action for Paragraphs (f), (g), (h), (i), and (j)**

(l) Unless already done, for airplanes having S/Ns 7013, 7017, 7037, 7046, 7059, 7076, 7105, 7127, 7151, 7157, 7163, 7174, 7179, 7203, 7204, 7228, 7271, 7347, 7362, 7378, 7417 through 7990 inclusive, 8000 through 8076 inclusive, 8082, 8086, 8090 through 8092 inclusive, 8096 and 8097: Installation, in accordance with the Accomplishment Instructions of Bombardier Service Bulletin 601R-30-029, Revision A, dated July 7, 2005, of a complete set of new inboard, center, and outboard piccolo tubes, as identified in paragraphs (l)(1), (l)(2), and (l)(3) of this AD, terminates the requirements of paragraphs (f), (g), (h), (i), and (j) of this AD. When these piccolo tubes have been installed, remove the Operating Limitations and Abnormal Procedures, if inserted in accordance with paragraph (g) of this AD, from the AFM.

(1) For the inboard piccolo tube: Part numbers (P/N) 601-80032-7 (14432-107) and 601-80032-8 (14432-108).

(2) For the center piccolo tube: P/N 14464-105 and 14464-106.

(3) For the outboard piccolo tube: P/N 14463-109 and 14463-110.

## **Parts Installation**

(m) Unless already done, for airplanes having S/Ns 7013, 7017, 7037, 7046, 7059, 7076, 7105, 7127, 7151, 7157, 7163, 7174, 7179, 7203, 7204, 7228, 7271, 7347, 7362, 7378, 7417 through 7990 inclusive, 8000 through 8076 inclusive, 8082, 8086, 8090 through 8092 inclusive, 8096 and 8097: As of September 7, 2005, no person may install, on any airplane, a piccolo tube having a P/N listed in paragraph 1.A. of Bombardier Service Bulletin 601R-30-029, Revision A, dated July 7, 2005, unless the applicable requirements of paragraphs (f) through (l) of this AD have been accomplished for that piccolo tube before the effective date of this AD or the requirements specified in paragraph (v) of this AD have been accomplished. As of December 1, 2008 (the effective date of AD 2008-23-16), the requirements of paragraph (v) of this AD must be followed.

## **Restatement of Requirements of AD 2008-23-16**

### **Revision to AFM**

(n) Unless already done: For all airplanes, within 14 days after December 1, 2008, revise the Operating Limitations and Abnormal Procedures sections of the Canadair Regional Jet AFM, CSP A-012, to include the information in Canadair (Bombardier) TR RJ/155-6, dated September 17, 2008, as specified in that TR. This may be done by inserting a copy of Canadair (Bombardier) TR RJ/155-6 into the AFM. This TR introduces new procedures for operation in icing conditions. After the AFM revision specified in this paragraph has been done, the AFM limitation required by paragraph (g) of this AD must be removed from the AFM.

Note 2: When Canadair (Bombardier) TR RJ/155-6, dated September 17, 2008, has been included in general revisions of the AFM, the general revisions may be inserted in the AFM, provided the relevant information in the general revision is identical to that in Canadair (Bombardier) TR RJ/155-6.

(o) Unless already done: Before further flight after accomplishing paragraph (n) of this AD, operate the airplane according to the limitations and procedures in Canadair (Bombardier) TR RJ/155-6, dated September 17, 2008, except that MMEL Entry 30-12-03, which permits the wing anti-ice system to be inoperative with specific provisions, is not affected by this AD.

## Records Check

(p) Unless already done, for airplanes having S/Ns 7003 through 7013 inclusive, 7015, 7016, 7018 through 7036 inclusive, 7038 through 7045 inclusive, 7047 through 7058 inclusive, 7060 through 7067 inclusive, 7069 through 7075 inclusive, 7077 through 7104 inclusive, 7106 through 7126 inclusive, 7128 through 7150 inclusive, 7152 through 7156 inclusive, 7158 through 7162 inclusive, 7164 through 7178 inclusive, 7180 through 7202 inclusive, 7204 through 7227 inclusive, 7229 through 7270 inclusive, 7272 through 7346 inclusive, 7348 through 7358 inclusive, 7360, 7361, 7363 through 7377 inclusive, 7379, 7380, 7382 through 7416 inclusive, 8056 through 8076 inclusive, 8082, 8086, 8090 through 8092 inclusive, 8096 and 8097: Within 30 days after December 1, 2008, review the airplane maintenance records to determine if any anti-ice piccolo ducts or complete leading edge sections have been replaced since May 1, 2000. Doing the review in this paragraph terminates the requirements of paragraphs (f) and (i) of this AD. Doing the action specified in paragraph (w) or (y) of this AD terminates the requirements of this paragraph.

(1) If no anti-ice piccolo ducts and no complete leading edge sections have been replaced since May 1, 2000, no further action is required by this paragraph.

(2) If any anti-ice piccolo duct or complete leading edge section has been replaced since May 1, 2000, or if it cannot be conclusively determined that no anti-ice piccolo ducts and no complete leading edge sections have been replaced since May 1, 2000, before further flight, inspect the serial numbers of the replaced ducts. A review of airplane maintenance records is acceptable in lieu of this inspection if the serial number of the duct can be conclusively determined from that review.

(i) If none of the piccolo duct serial numbers match any of those in Part A, Paragraph 2.A., of the Accomplishment Instructions of Bombardier Alert Service Bulletin A601R-30-032, dated September 18, 2008, no further action is required by this paragraph.

(ii) If any of the piccolo duct serial numbers matches any of those in Part A, Paragraph 2.A., of the Accomplishment Instructions of Bombardier Alert Service Bulletin A601R-30-032, dated September 18, 2008, or if the serial number cannot be determined, do the actions required by paragraph (s) of this AD.

(q) Unless already done, for airplanes having S/Ns 7014, 7017, 7037, 7046, 7059, 7076, 7105, 7127, 7151, 7157, 7163, 7179, 7203, 7228, 7271, 7347, 7359, 7362, 7378, 7381, 7417 through 7990 inclusive, and 8000 through 8055 inclusive, on which Bombardier Service Bulletin 601R-30-029 has been accomplished: Within 30 days after December 1, 2008, review the airplane maintenance records to determine if any anti-ice piccolo ducts or complete leading edge sections have been replaced since accomplishing Bombardier Service Bulletin 601R-30-029. Doing the action in this paragraph terminates the requirements of paragraphs (f) and (i) of this AD. Doing the action specified in paragraph (w) or (y) of this AD terminates the requirements of this paragraph.

(1) If no anti-ice piccolo ducts and no complete leading edge sections have been replaced since May 1, 2000, no further action is required by this paragraph.

(2) If any anti-ice piccolo duct or complete leading edge section has been replaced since May 1, 2000, or if it cannot be conclusively determined that no anti-ice piccolo ducts and no complete leading edge sections have been replaced since May 1, 2000, before further flight, inspect the serial numbers of the replaced ducts. A review of airplane maintenance records is acceptable in lieu of this inspection if the serial number of the duct can be conclusively determined from that review.

(i) If none of the piccolo duct serial numbers match any of those in Part A, Paragraph 2.A., of the Accomplishment Instructions of Bombardier Alert Service Bulletin A601R-30-032, dated September 18, 2008, no further action is required by this paragraph.

(ii) If any of the piccolo duct serial numbers matches any of those in Part A, Paragraph 2.A., of the Accomplishment Instructions of Bombardier Alert Service Bulletin A601R-30-032, dated September 18, 2008, or if the serial number cannot be determined, do the actions required by paragraph (s) of this AD.

(r) Unless already done, for airplanes having S/Ns 7014, 7017, 7037, 7046, 7059, 7076, 7105, 7127, 7151, 7157, 7163, 7179, 7203, 7228, 7271, 7347, 7359, 7362, 7378, 7381, 7417 through 7990 inclusive, and 8000 through 8055 inclusive, on which Bombardier Service Bulletin 601R-30-029 has not been accomplished: Within 30 days after December 1, 2008, inspect the serial numbers of the piccolo ducts. A review of airplane maintenance records is acceptable in lieu of this inspection if the serial number of the duct can be conclusively determined from that review. Doing the inspection in this paragraph terminates the requirements of paragraphs (f) and (i) of this AD. Doing the action specified in paragraph (w) or (y) of this AD terminates the requirements of this paragraph.

(1) If none of the piccolo duct serial numbers match any of those in Part A, Paragraph 2.A., of the Accomplishment Instructions of Bombardier Alert Service Bulletin A601R-30-032, dated September 18, 2008, no further action is required by this paragraph.

(2) If any of the piccolo duct serial numbers matches any of those in Part A, Paragraph 2.A., of the Accomplishment Instructions of Bombardier Alert Service Bulletin A601R-30-032, dated September 18, 2008, or if the serial number cannot be determined, do the actions required by paragraph (s) of this AD.

### **Inspection of the Wing Anti-Ice Piccolo Ducts**

(s) Unless already done, for airplanes having a piccolo duct identified in paragraph (p)(2)(ii), (q)(2)(ii), or (r)(2) of this AD: Within 30 days after doing the action specified in paragraph (p), (q), or (r) of this AD, as applicable, do a fluorescent dye penetrant inspection for cracking of the piccolo ducts, in accordance with the Accomplishment Instructions of Bombardier Alert Service Bulletin A601R-30-032, dated September 18, 2008. If no cracking is found, repeat the inspection thereafter at intervals not to exceed 2,000 flight hours. Doing the action specified in paragraph (w) or (y) of this AD terminates the requirements of this paragraph.

(t) Unless already done: If any cracking is found during any inspection required by paragraph (s) of this AD, before further flight, do the actions specified in paragraph (t)(1), (t)(2), or (t)(3) of this AD, except where Bombardier Alert Service Bulletin A601R-30-032, dated September 18, 2008, specifies to contact Bombardier for information regarding repair, this AD requires repair according to a method approved by either the Manager, New York ACO, or TCCA (or its delegated agent). Doing the action specified in paragraph (w) or (y) of this AD terminates the requirements of this paragraph.

(1) Replace the cracked piccolo duct, in accordance with the Accomplishment Instructions of Bombardier Alert Service Bulletin A601R-30-032, dated September 18, 2008, with a new piccolo duct that has the same part number as identified in Part A, Paragraph 2.A., of the Accomplishment Instructions of Bombardier Alert Service Bulletin A601R-30-032, dated September 18, 2008, but that does not have a serial number listed in that paragraph.

(2) Replace the cracked piccolo duct, in accordance with the Accomplishment Instructions of Bombardier Alert Service Bulletin A601R-30-032, dated September 18, 2008, with a new piccolo duct that has a part number identified in the applicable Bombardier illustrated parts catalog but not identified in Part A, Paragraph 2.A., of the Accomplishment Instructions of Bombardier Alert Service Bulletin A601R-30-032, dated September 18, 2008.

(3) Replace the cracked piccolo duct with a piccolo duct that has been repaired in accordance with a method approved by either the Manager, New York ACO, FAA; or TCCA (or its delegated agent).

### **Repetitive Inspection of the Wing Anti-Ice Piccolo Ducts**

(u) Unless already done, for airplanes on which an inspection required by paragraph (h)(1) of this AD has been done, except for airplanes on which the terminating action specified in paragraph (l) of this AD has been done: Within 2,000 flight hours since the last inspection, or 30 days after December 1, 2008, whichever occurs later, do the actions specified in paragraph (s) of this AD. Doing the

inspection required by this paragraph terminates the actions required by paragraph (h)(1) of this AD. Doing the action specified in paragraph (w) or (y) of this AD terminates the requirements of this paragraph.

### **Parts Installation Paragraph**

(v) Unless already done: As of December 1, 2008, the requirements specified in paragraphs (v)(1) and (v)(2) of this AD must be followed.

(1) For airplanes on which the terminating action specified in paragraph (w) of this AD had not been done as of December 1, 2008: No person may install a piccolo duct having a part number identified in Part A, Paragraph 2.A., of the Accomplishment Instructions of Bombardier Alert Service Bulletin A601R-30-032, dated September 18, 2008, on any airplane, unless the requirements specified in paragraphs (s) and (t) of this AD, as applicable, have been accomplished for that piccolo duct.

(2) For airplanes on which the terminating action specified in paragraph (w) of this AD had been done as of December 1, 2008: No person may install a piccolo duct having a part number identified in Part A, Paragraph 2.A., of the Accomplishment Instructions of Bombardier Alert Service Bulletin A601R-30-032, dated September 18, 2008, on any airplane.

### **Optional Terminating Action**

(w) Replacing all piccolo ducts that have serial numbers identified in Part A, Paragraph 2.A., of the Accomplishment Instructions of Bombardier Alert Service Bulletin A601R-30-032, dated September 18, 2008, with piccolo ducts that do not have serial numbers identified in Part A, Paragraph 2.A., of the Accomplishment Instructions of Bombardier Alert Service Bulletin A601R-30-032, dated September 18, 2008, in accordance with the Accomplishment Instructions of Bombardier Alert Service Bulletin A601R-30-032, dated September 18, 2008, terminates the requirements of paragraphs (f), (h), (i), (p), (q), (r), (s), (t), and (u) of this AD.

### **Optional Service Information for Certain Requirements of This AD**

(x) Actions accomplished according to Bombardier Service Bulletin 601R-30-029, Revision B, dated August 29, 2005; or Bombardier Alert Service Bulletin A601R-30-032, dated September 18, 2008; are considered acceptable for compliance with the corresponding actions specified in paragraphs (h)(1), (j)(1), (j)(2), (j)(3), and (l) of this AD.

### **New Requirements of This AD: Actions and Compliance**

#### **Terminating Action**

(y) Unless already done, do the following actions: Within 24 months after the effective date of this AD, replace all piccolo ducts that have serial numbers identified in Part A, Paragraph 2.A., of the Accomplishment Instructions of Bombardier Alert Service Bulletin A601R-30-032, dated September 18, 2008, with piccolo ducts that do not have serial numbers identified in Part A, Paragraph 2.A., of the Accomplishment Instructions of Bombardier Alert Service Bulletin A601R-30-032, dated September 18, 2008, in accordance with the Accomplishment Instructions of Bombardier Alert Service Bulletin A601R-30-032, dated September 18, 2008. Replacing all the piccolo ducts in accordance with this paragraph terminates the requirements of paragraphs (f), (h), (i), (p), (q), (r), (s), (t), and (u) of this AD.

## FAA AD Differences

Note 3: This AD differs from the MCAI and/or service information as follows: No differences.

## Other FAA AD Provisions

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

(1) Alternative Methods of Compliance (AMOCs): The Manager, New York ACO, ANE-170, FAA, has the authority to approve AMOCs for this AD, if requested using the procedures found in 14 CFR 39.19. Send information to ATTN: Program Manager, Continuing Operational Safety, FAA, New York ACO, 1600 Stewart Avenue, Suite 410, Westbury, New York 11590; telephone 516-228-7300; fax 516-794-5531. Before using any approved AMOC on any airplane to which the AMOC applies, notify your principal maintenance inspector (PMI) or principal avionics inspector (PAI), as appropriate, or lacking a principal inspector, your local Flight Standards District Office.

(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.

(3) Reporting Requirements: For any reporting requirement in this AD, under the provisions of the Paperwork Reduction Act (44 U.S.C. 3501 et seq.), the Office of Management and Budget (OMB) has approved the information collection requirements and has assigned OMB Control Number 2120-0056.

## Related Information

(aa) Refer to MCAI Canadian Airworthiness Directive CF-2008-30, dated October 7, 2008, and the service information identified in Table 1 of this AD, for related information.

**Table 1 - Related Service Information**

<b>Service Information</b>	<b>Revision Level</b>	<b>Date</b>
Bombardier Alert Service Bulletin A601R-30-032, including Appendix A and Appendix B	Original	September 18, 2008
Bombardier Service Bulletin 601R-30-029, including Appendices A and B, dated June 17, 2005	Original	June 17, 2005
Bombardier Service Bulletin 601R-30-029, including Appendix A, dated June 17, 2005, and Appendix B, Revision A, dated July 7, 2005	A	July 7, 2005
Bombardier Service Bulletin 601R-30-029, including Appendix A, dated June 17, 2005, and Appendix B, Revision A, dated July 7, 2005	B	August 29, 2005
Canadair (Bombardier) Temporary Revision RJ/155-6 to the Canadair Regional Jet Airplane Flight Manual, CSP A-012	Original	September 17, 2008
Canadair Temporary Revision RJ/155 to the Canadair Regional Jet Airplane Flight Manual, CSP A-012	Original	July 5, 2005

## Material Incorporated by Reference

(bb) You must use the service information contained in Table 2 of this AD, as applicable, to do the actions required by this AD, unless the AD specifies otherwise. If you accomplish the optional actions specified by this AD, you must use the service information contained in Table 3 of this AD, as applicable, unless the AD specifies otherwise.

**Table 2 – Material Incorporated by Reference for Required Actions**

<b>Service Information</b>	<b>Revision Level</b>	<b>Date</b>
Bombardier Alert Service Bulletin A601R-30-032, including Appendix A and Appendix B	Original	September 18, 2008
Bombardier Service Bulletin 601R-30-029, including Appendix A, dated June 17, 2005, and Appendix B, Revision A, dated July 7, 2005	A	July 7, 2005
Canadair (Bombardier) Temporary Revision RJ/155-6 to the Canadair Regional Jet Airplane Flight Manual, CSP A-012	Original	September 17, 2008
Canadair Temporary Revision RJ/155 to the Canadair Regional Jet Airplane Flight Manual, CSP A-012	Original	July 5, 2005

**Table 3 – Material Incorporated by Reference for Optional Actions**

<b>Service Information</b>	<b>Revision Level</b>	<b>Date</b>
Bombardier Alert Service Bulletin A601R-30-032, including Appendix A and Appendix B	Original	September 18, 2008
Bombardier Service Bulletin 601R-30-029, including Appendices A and B, dated June 17, 2005	Original	June 17, 2005
Bombardier Service Bulletin 601R-30-029, including Appendix A, dated June 17, 2005, and Appendix B, Revision A, dated July 7, 2005	A	July 7, 2005
Bombardier Service Bulletin 601R-30-029, including Appendix A, dated June 17, 2005, and Appendix B, Revision A, dated July 7, 2005	B	August 29, 2005

(1) The Director of the Federal Register approved Bombardier Service Bulletin 601R-30-029, dated June 17, 2005, including Appendices A and B, dated June 17, 2005; and Bombardier Service Bulletin 601R-30-029, Revision B, dated August 29, 2005, including Appendix A, dated June 17, 2005, and Appendix B, Revision A, dated July 7, 2005; under 5 U.S.C. 552(a) and 1 CFR part 51.

(2) On December 1, 2008 (73 FR 67363, November 14, 2008), the Director of the Federal Register previously approved the incorporation by reference of Bombardier Alert Service Bulletin

A601R-30-032, including Appendix A and Appendix B, dated September 18, 2008; and Canadair (Bombardier) Temporary Revision RJ/155-6, dated September 17, 2008, to the Canadair Regional Jet Airplane Flight Manual, CSP A-012.

(3) On September 7, 2005 (70 FR 49164, August 23, 2005), the Director of the Federal Register previously approved the incorporation by reference of Canadair Temporary Revision RJ/155, dated July 5, 2005, to the Canadair Regional Jet Airplane Flight Manual, CSP A-012; and Bombardier Service Bulletin 601R-30-029, Revision A, dated July 7, 2005, including Appendix A, dated June 17, 2005, and Appendix B, Revision A, dated July 7, 2005.

(4) 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>.

(5) 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 or 425-227-1152.

(6) 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 October 19, 2009.

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