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DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

14 CFR Part 39

[Docket No. FAA-2009-0398; Directorate Identifier 2008-NM-193-AD; Amendment 39-15971; AD 2009-15-08

RIN 2120-AA64

Airworthiness Directives; BAE Systems (Operations) Limited Model BAe 146 and Avro 146-RJ Airplanes

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

ACTION: Final rule.

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:

There have been a number of incidents where wing-to-fuselage or MLG [main landing gear] door fairing panels have detached from the aircraft during flight. Subsequent inspection revealed the loss of the fairing panels to be due to failure of certain steel grommets * * *. A detaching panel could strike the aircraft during flight, causing damage. In addition, a detaching panel could become attached to the structure or control surfaces, resulting in reduced control of the aircraft.

* * * * *

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

DATES: This AD becomes effective August 25, 2009.

The Director of the Federal Register approved the incorporation by reference of a certain publication listed in this AD as of August 25, 2009.

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: Todd Thompson, Aerospace Engineer, International Branch, ANM-116, Transport Airplane Directorate, FAA, 1601 Lind Avenue, SW., Renton, Washington 98057-3356; telephone (425) 227-1175; fax (425) 227-1149.

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 April 30, 2009 (74 FR 19905). That NPRM proposed to correct an unsafe condition for the specified products. The MCAI states:

There have been a number of incidents where wing-to-fuselage or MLG [main landing gear] door fairing panels have detached from the aircraft during flight. Subsequent inspection revealed the loss of the fairing panels to be due to failure of certain steel grommets, (P/N) [part number] SL5183 and HC535H0312, through which the attachment bolts are inserted. These failures may have been caused by improper installation of the grommets or damage resulting from maintenance procedures relating to paint stripping and repainting, allowing air loads to pull the panel through the grommet. A detaching panel could strike the aircraft during flight, causing damage. In addition, a detaching panel could become attached to the structure or control surfaces, resulting in reduced control of the aircraft.

Following the application of BAE Systems (Operations) Ltd ISB 53-202 at Revision 1 to the first few, it has been discovered that removal of existing grommets P/N SL5183 and HC535H0312 may result in localised damage to the aluminum foil membrane attached to the inner surface of some fairing panels. BAE Systems (Operations) Ltd has therefore issued additional instructions in All Operators Message (AOM) 08-015V, including bonding checks and detailed procedures for applying an electro-conductive paste at each SL5185 grommet location in order to bridge any gap between grommet and the inner aluminum foil. The next revision of BAE Systems (Operations) Ltd ISB 53-202 will include the technical content of AOM 08-015V.

For the reasons described above, this EASA AD requires repetitive inspections of the wing-to-fuselage & MLG door fairing panel grommets and, when damage is detected, the accomplishment of corrective actions.

Corrective actions include replacing damaged grommets with new P/N SL5185 grommets; or doing a temporary repair, which defers the replacement. You may obtain further information by examining the MCAI in the AD docket.

Clarification for Unsatisfactory Bonding

Unsatisfactory bonding, as used in this AD, is defined as: Intermittent loss of, or failure of the bond/electrical connection.

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.

Conclusion

We reviewed the available data and determined that air safety and the public interest require adopting the AD as proposed.

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 1 product of U.S. registry. We also estimate that it will take about 14 work-hours per product to comply with the basic requirements of this AD. The average labor rate is \$80 per work-hour. Based on these figures, we estimate the cost of this AD to the U.S. operators to be \$1,120.

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:



2009-15-08 BAE Systems (Operations) Limited (Formerly British Aerospace Regional Aircraft): Amendment 39-15971. Docket No. FAA-2009-0398; Directorate Identifier 2008-NM-193-AD.

Effective Date

- (a) This airworthiness directive (AD) becomes effective August 25, 2009.

Affected ADs

- (b) None.

Applicability

(c) This AD applies to BAE Systems (Operations) Limited Model BAe 146-100A, -200A, and -300A series airplanes; and Model Avro 146-RJ70A, 146-RJ85A, and 146-RJ100A airplanes, certificated in any category; all models, all serial numbers, that have embodied modification HCM00633E or HCM00934A.

Subject

- (d) Air Transport Association (ATA) of America Code 53: Fuselage.

Reason

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

There have been a number of incidents where wing-to-fuselage or MLG [main landing gear] door fairing panels have detached from the aircraft during flight. Subsequent inspection revealed the loss of the fairing panels to be due to failure of certain steel grommets, (P/N) [part number] SL5183 and HC535H0312, through which the attachment bolts are inserted. These failures may have been caused by improper installation of the grommets or damage resulting from maintenance procedures relating to paint stripping and repainting, allowing air loads to pull the panel through the grommet. A detaching panel could strike the aircraft during flight, causing damage. In addition, a detaching panel could become attached to the structure or control surfaces, resulting in reduced control of the aircraft.

Following the application of BAE Systems (Operations) Ltd ISB 53-202 at Revision 1 to the first few, it has been discovered that removal of existing grommets P/N SL5183 and HC535H0312 may result in localised damage to the aluminum foil membrane attached to the inner surface of some fairing panels. BAE Systems (Operations) Ltd has therefore issued additional instructions in All Operators Message (AOM) 08-015V, including bonding checks and detailed procedures for applying an electro-conductive paste at each SL5185 grommet location in order to bridge any gap between grommet and the inner

aluminum foil. The next revision of BAE Systems (Operations) Ltd ISB 53-202 will include the technical content of AOM 08-015V.

For the reasons described above, this EASA AD requires repetitive inspections of the wing-to-fuselage & MLG door fairing panel grommets and, when damage is detected, the accomplishment of corrective actions.

Corrective actions include replacing damaged grommets with new P/N SL5185 grommets; or doing a temporary repair, which defers the replacement.

Actions and Compliance

(f) Unless already done, do the following actions.

(1) Within 4,000 flight cycles or 24 months after the effective date of this AD, whichever occurs later, and thereafter at intervals not to exceed 8,000 flight cycles, conduct a visual inspection of the steel grommets on the fairing panels in accordance with paragraph 2.C. of BAE Systems (Operations) Limited Inspection Service Bulletin ISB.53-202, Revision 3, dated December 10, 2008.

(2) If damage is found during any inspection required by paragraph (f)(1) of this AD, before further flight, do the actions specified in paragraph (f)(2)(i) or (f)(2)(ii) of this AD.

(i) Replace the grommets with new P/N SL5185 grommets in accordance with paragraph 2.C. of BAE Systems (Operations) Limited Inspection Service Bulletin ISB.53-202, Revision 3, dated December 10, 2008, and concurrently conduct a bonding inspection at each grommet location in accordance with paragraph 2.C. of BAE Systems (Operations) Limited Inspection Service Bulletin ISB.53-202, Revision 3, dated December 10, 2008. If unsatisfactory bonding is detected, before further flight, apply electro-conductive paste in accordance with Appendix 4 of BAE Systems (Operations) Limited Inspection Service Bulletin ISB.53-202, Revision 3, dated December 10, 2008.

Note 1: Unsatisfactory bonding, as used in this AD, is defined as: intermittent, loss of, or failure of the bond/electrical connection.

(ii) Do a temporary repair in accordance with Appendix 3 of the BAE Systems (Operations) Limited Inspection Service Bulletin ISB.53-202, Revision 3, dated December 10, 2008, or an approved BAE Systems (Operations) Limited temporary repair scheme.

(3) For airplanes on which a temporary repair specified in paragraph (f)(2)(ii) of this AD has been done: Within 8,000 flight cycles after doing the temporary repair, replace any temporary repair grommets with new P/N SL5185 grommets in accordance with paragraph 2.C. of BAE Systems (Operations) Limited Inspection Service Bulletin ISB.53-202, Revision 3, dated December 10, 2008, and concurrently conduct a bonding inspection at each grommet location in accordance with paragraph 2.C. of BAE Systems (Operations) Limited Inspection Service Bulletin ISB.53-202, Revision 3, dated December 10, 2008. If unsatisfactory bonding is detected, before further flight, apply electro-conductive paste in accordance with Appendix 4 of BAE Systems (Operations) Limited Inspection Service Bulletin ISB.53-202, Revision 3, dated December 10, 2008.

(4) For airplanes on which any new P/N SL5185 grommets have been installed without having a bonding inspection prior to the effective date of this AD: Before or during the next scheduled repetitive inspection in accordance with paragraph (f)(1) of this AD, conduct a bonding inspection in accordance with paragraph 2.C. of BAE Systems (Operations) Limited Inspection Service Bulletin ISB.53-202, Revision 3, dated December 10, 2008. If unsatisfactory bonding is detected, before further flight, apply electro-conductive paste in accordance with Appendix 4 of BAE Systems (Operations) Limited Inspection Service Bulletin ISB.53-202, Revision 3, dated December 10, 2008.

(5) Replacing all existing grommets with new P/N SL5185 grommets on all panels, including the corresponding bonding inspections and the application of the electro-conductive paste as applicable,

in accordance with BAE Systems (Operations) Limited Inspection Service Bulletin ISB.53-202, Revision 3, dated December 10, 2008, terminates the repetitive inspections required by paragraph (f)(1) of this AD.

(6) Visual inspections, temporary repairs, and replacements of the grommets are also acceptable for compliance with the corresponding requirements of paragraphs (f)(1), (f)(2)(i), (f)(2)(ii), (f)(3), and (f)(5) of this AD if done before the effective date of this AD in accordance with BAE Systems (Operations) Limited Inspection Service Bulletin ISB.53-202, Revision 1, dated June 4, 2008.

(7) Visual inspections, temporary repairs, replacements of the grommets, bonding inspections, and applications of conductive paste are also acceptable for compliance with the corresponding requirements of paragraphs (f)(1), (f)(2)(i), (f)(2)(ii), (f)(3), (f)(4), and (f)(5) of this AD if done before the effective date of this AD in accordance with BAE Systems (Operations) Limited Inspection Service Bulletin ISB.53-202, Revision 2, dated October 24, 2008.

(8) Bonding inspections and applications of conductive paste are also acceptable for compliance with the corresponding requirement of paragraphs (f)(2)(i), (f)(3), (f)(4), and (f)(5) of this AD if done before the effective date of this AD in accordance with BAE Systems (Operations) Limited All Operator Message 08-015V, Issue 1, dated August 22, 2008.

FAA AD Differences

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

Other FAA AD Provisions

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

(1) Alternative Methods of Compliance (AMOCs): The Manager, International Branch, ANM-116, Transport Airplane Directorate, 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: Todd Thompson, Aerospace Engineer, International Branch, ANM-116, Transport Airplane Directorate, FAA, 1601 Lind Avenue, SW., Renton, Washington 98057-3356; telephone (425) 227-1175; fax (425) 227-1149. 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 ensure 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, the Office of Management and Budget (OMB) has approved the information collection requirements and has assigned OMB Control Number 2120-0056.

Related Information

(h) Refer to MCAI European Aviation Safety Agency Airworthiness Directive 2008-0180, dated September 30, 2008; and BAE Systems (Operations) Limited Inspection Service Bulletin ISB.53-202, Revision 3, dated December 10, 2008; for related information.

Material Incorporated by Reference

(i) You must use BAE Systems (Operations) Limited Inspection Service Bulletin ISB.53-202, Revision 3, dated December 10, 2008, 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 BAE Systems Regional Aircraft, 13850 McLearen Road, Herndon, Virginia 20171; telephone 703-736-1080; e-mail raebusiness@baesystems.com; Internet <http://www.baesystems.com/Businesses/RegionalAircraft/index.htm>.

(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 or 425-227-1152.

(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.

Issued in Renton, Washington, on July 2, 2009.

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