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DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

14 CFR Part 39

[Docket No. FAA-2009-0532; Directorate Identifier 2008-NM-024-AD; Amendment 39-15994; AD 2009-17-03]

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:

The airbrake upper crossbeam on an airplane failed in-flight. The crossbeam failure caused damage to the rudder control system, resulting in loss of rudder control. Loss of rudder control will cause handling difficulties particularly during take-off, approach, and landing phases in cross winds.

* * * * *

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

DATES: This AD becomes effective September 22, 2009.

The Director of the Federal Register approved the incorporation by reference of certain publications listed in this AD as of September 22, 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 June 11, 2009 (74 FR 27725). That NPRM proposed to correct an unsafe condition for the specified products. The MCAI states:

The airbrake upper crossbeam on an airplane failed in-flight. The crossbeam failure caused damage to the rudder control system, resulting in loss of rudder control. Loss of rudder control will cause handling difficulties particularly during take-off, approach, and landing phases in cross winds.

BAE Systems (Operations) Ltd has published Inspection Service Bulletin (ISB) 53-200 that revises and supersedes the inspection requirements, which are defined in the Maintenance Review Board Report (MRBR) SSI Task 53-40-125, Supplemental Structural Inspections Document (SSID) Tasks 53-40-125.1 and 53-40-125.2 (included in the Airworthiness Limitations Section of Aircraft Maintenance Manual Chapter 5 that is currently mandated as part of EASA AD 2007-0271 [which corresponds to an FAA NPRM, Directorate Identifier 2007-NM-363-AD]) and in Maintenance Planning Document (MPD) Task Reference 534025-DVI-10000-1. These revised inspection requirements and reduced inspection periods are to ensure that any fatigue damage is detected before it causes upper airbrake crossbeam failure. MRBR, SSID and MPD will be amended in due course to reflect these revised inspection periods.

For the reasons stated above, this Airworthiness Directive (AD) requires the [high frequency eddy current and low frequency phase analysis eddy current] inspection [for cracking, discrete surface damage, and discontinuity (corrosion and mechanical damage)] and, as necessary, repair of the airbrake upper crossbeam.

The required actions include replacing the three rivets with Hi-lok pins. For cracking, damage, or discontinuity that is outside certain limits defined in the service bulletin, the repair includes contacting BAE Systems (Operations) Limited for repair instructions and doing the repair. 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.

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 affects 1 product of U.S. registry. We also estimate that it takes about 6 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 \$480 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 adding the following new AD:



2009-17-03 BAE Systems (Operations) Limited (Formerly British Aerospace Regional Aircraft): Amendment 39-15994. Docket No. FAA-2009-0532; Directorate Identifier 2008-NM-024-AD.

Effective Date

- (a) This airworthiness directive (AD) becomes effective September 22, 2009.

Affected ADs

- (b) None.

Applicability

- (c) This AD applies to all BAE Systems (Operations) Limited Model BAe 146 and Avro 146-RJ airplanes, certificated in any category.

Subject

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

Reason

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

The airbrake upper crossbeam on an airplane failed in-flight. The crossbeam failure caused damage to the rudder control system, resulting in loss of rudder control. Loss of rudder control will cause handling difficulties particularly during take-off, approach, and landing phases in cross winds.

BAE Systems (Operations) Ltd has published Inspection Service Bulletin (ISB) 53-200 that revises and supersedes the inspection requirements, which are defined in the Maintenance Review Board Report (MRBR) SSI Task 53-40-125, Supplemental Structural Inspections Document (SSID) Tasks 53-40-125.1 and 53-40-125.2 (included in the Airworthiness Limitations Section of Aircraft Maintenance Manual Chapter 5 that is currently mandated as part of EASA AD 2007-0271 [which corresponds to an FAA NPRM, Directorate Identifier 2007-NM-363-AD]) and in Maintenance Planning Document (MPD) Task Reference 534025-DVI-10000-1. These revised inspection requirements and reduced inspection periods are to ensure that any fatigue damage is detected before it causes upper airbrake crossbeam failure. MRBR, SSID and MPD will be amended in due course to reflect these revised inspection periods.

For the reasons stated above, this Airworthiness Directive (AD) requires the [high frequency eddy current and a low frequency phase analysis eddy current] inspection [for

cracking, discrete surface damage, and discontinuity (corrosion and mechanical damage)] and, as necessary, repair of the airbrake upper crossbeam.

The required actions include replacing the three rivets with Hi-lok pins. For cracking, damage, or discontinuity that is outside certain limits defined in the service bulletin, the repair includes contacting BAE Systems (Operations) Limited for repair instructions and doing the repair.

Actions and Compliance

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

(1) At the applicable time specified in paragraphs (f)(1)(i) and (f)(1)(ii) of this AD, inspect for cracking, damage, and discontinuity of the airbrake upper crossbeam fastener positions and lightening holes; and replace the three rivets with Hi-lok pins; in accordance with paragraphs 2.B., 2.C., and 2.D. of the Accomplishment Instructions of BAE Systems (Operations) Limited Inspection Service Bulletin ISB.53-200, Revision 1, dated March 13, 2007. If any crack, damage, or discontinuity is found: Before further flight, repair as required by paragraph (f)(3) of this AD.

(i) For airplanes that have not been inspected in accordance with BAE Systems (Operations) Limited MRBR SSI Task No. 53-40-125 (MPD Reference 534025-DVI-10000-1) as of the effective date of this AD, do the inspection prior to accumulating 20,000 total flight cycles or 500 flight cycles after the effective date of this AD, whichever occurs later.

(ii) For airplanes subject to MRBR and SSID requirements that have been inspected in accordance with BAE Systems (Operations) Limited MRBR SSI Task No. 53-40-125 (MPD Reference 534025-DVI-10000-1) as of the effective date of this AD, do the inspection at the latest of the times in paragraphs (f)(1)(ii)(A), (f)(1)(ii)(B), or (f)(1)(ii)(C) of this AD.

(A) Before the accumulation of 4,000 flight cycles since last inspection.

(B) Within 2,500 flight cycles (for MRBR airplanes), or within 1,000 flight cycles (for SSID airplanes) after the effective date of this AD; but not exceeding 8,000 flight cycles since the last inspection.

(C) Within 500 flight cycles after the effective date of this AD.

(2) Repeat the inspection required by paragraph (f)(1) of this AD thereafter at the applicable time specified in paragraph (f)(2)(i), (f)(2)(ii), or (f)(2)(iii) of this AD. If any crack, damage, or discontinuity is found: Before further flight, repair as required by paragraph (f)(3) of this AD.

(i) Inspect fastener positions at the rivet locations at intervals not to exceed 4,000 flight cycles.

(ii) Inspect the holes at Hi-lok pin locations at intervals not to exceed 12,000 flight cycles.

(iii) Inspect the lightening holes at intervals not to exceed 12,000 flight cycles.

(3) If any crack, damage, or discontinuity is found during any inspection required by this AD: Before further flight, do the repair in accordance with paragraph 2.E. of the Accomplishment Instructions of BAE Systems (Operations) Limited Inspection Service Bulletin ISB.53-200, Revision 1, dated March 13, 2007.

(4) Actions accomplished before the effective date of this AD in accordance with BAE Systems (Operations) Limited Inspection Service Bulletin ISB.53-200, dated December 21, 2006, are considered acceptable for compliance with the corresponding action specified in this AD.

FAA AD Differences

Note 1: 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. 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.

(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 2007-0307, dated December 17, 2007; and BAE Systems (Operations) Limited Inspection Service Bulletin ISB.53-200, Revision 1, dated March 13, 2007; for related information.

Material Incorporated by Reference

(i) You must use BAE Systems (Operations) Limited Inspection Service Bulletin ISB.53-200, Revision 1, dated March 13, 2007, 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 August 4, 2009.

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