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**DEPARTMENT OF TRANSPORTATION**

**Federal Aviation Administration**

**14 CFR Part 39**

**[Docket No. FAA-2009-0912; Directorate Identifier 2009-NM-047-AD; Amendment 39-16182; AD 2010-02-11]**

**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.

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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:

Reports have been received of finding corrosion at the Frame 29 wing-to-fuselage attachment lug plate joint. This condition, if not detected and corrected, could result in a degradation of the structural integrity of Frame 29 and the wing-to-fuselage attachment.

\* \* \* \* \*

The unsafe condition is degradation of the structural integrity of Frame 29 and the wing-to-fuselage attachment, which could result in loss of control of the airplane. We are issuing this AD to require actions to correct the unsafe condition on these products.

**DATES:** This AD becomes effective March 4, 2010.

The Director of the Federal Register approved the incorporation by reference of a certain publication listed in this AD as of March 4, 2010.

**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 October 19, 2009 (74 FR 53433). That NPRM proposed to correct an unsafe condition for the specified products. The MCAI states:

Reports have been received of finding corrosion at the Frame 29 wing-to-fuselage attachment lug plate joint. This condition, if not detected and corrected, could result in a degradation of the structural integrity of Frame 29 and the wing-to-fuselage attachment.

The current method of inspecting the Frame 29 wing-to-fuselage attachment lug plate joint for corrosion is not considered adequate for finding corrosion in this particular area.

To address this concern, BAE Systems (Operations) Limited has published Inspection Service Bulletin ISB.53-213, which replaces current Maintenance Review Board Report Structurally Significant Items Task 53-20-103 (equal to Maintenance Planning Document Tasks 532003-DVI-10000-1, 532003-DVI-10000-2 and 532003-DVI-10000-3) and Corrosion Prevention and Control Programme Task C53-230-02-01.

For the reason described above, this AD requires repetitive [detailed] inspections of the Frame 29 wing-to-fuselage attachment lug plate joint [for discrepancies, which are corrosion and fatigue cracking of the bolts and fastener bores; degraded, cracked, missing, and poor condition sealant] and repair(s) [which include replacing bolts, contacting BAE Systems for repair instructions and doing the repair, and re-applying sealant], as necessary.

The unsafe condition is degradation of the structural integrity of Frame 29 and the wing-to-fuselage attachment, which could result in loss of control of the airplane. 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 This 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.

## **Conclusion**

We reviewed the available data, and determined that air safety and the public interest require adopting the AD with the change described previously. We determined that this change 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 1 product of U.S. registry. We also estimate that it will take about 12 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. operator to be \$960.

## **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:



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**2010-02-11 BAE Systems (Operations) Limited:** Amendment 39-16182. Docket No. FAA-2009-0912; Directorate Identifier 2009-NM-047-AD.

**Effective Date**

- (a) This airworthiness directive (AD) becomes effective March 4, 2010.

**Affected ADs**

- (b) None.

**Applicability**

(c) This AD applies to BAE SYSTEMS (Operations) Limited Model BAe 146-100A, -200A, and -300A series airplanes; and BAE SYSTEMS (Operations) Limited Model Avro 146-RJ70A, 146-RJ85A, and 146-RJ100A airplanes; certificated in any category; all serial numbers.

**Subject**

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

**Reason**

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

Reports have been received of finding corrosion at the Frame 29 wing-to-fuselage attachment lug plate joint. This condition, if not detected and corrected, could result in a degradation of the structural integrity of Frame 29 and the wing-to-fuselage attachment.

The current method of inspecting the Frame 29 wing-to-fuselage attachment lug plate joint for corrosion is not considered adequate for finding corrosion in this particular area.

To address this concern, BAE Systems (Operations) Limited has published Inspection Service Bulletin ISB.53-213, which replaces current Maintenance Review Board Report Structurally Significant Items Task 53-20-103 (equal to Maintenance Planning Document Tasks 532003-DVI-10000-1, 532003-DVI-10000-2 and 532003-DVI-10000-3) and Corrosion Prevention and Control Programme Task C53-230-02-01.

For the reason described above, this AD requires repetitive [detailed] inspections of the Frame 29 wing-to-fuselage attachment lug plate joint [for discrepancies, which are corrosion and fatigue cracking of the bolts and fastener bores; degraded, cracked, missing, and poor condition sealant] and repair(s) [which include replacing bolts,

contacting BAE Systems for repair instructions and doing the repair and re-applying sealant], as necessary.

The unsafe condition is degradation of the structural integrity of Frame 29 and the wing-to-fuselage attachment, which could result in loss of control of the airplane.

### **Actions and Compliance**

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

(1) Within 24 months after the effective date of this AD, do a detailed inspection for discrepancies of the frame 29 wing-to-fuselage attachment lug plate joint, in accordance with the Accomplishment Instructions of BAE SYSTEMS (Operations) Limited Inspection Service Bulletin ISB.53-213, dated May 21, 2008.

Note 1: For the purposes of this AD, a detailed inspection is: "An intensive examination of a specific item, installation, or assembly to detect damage, failure, or irregularity. Available lighting is normally supplemented with a direct source of good lighting at an intensity deemed appropriate. Inspection aids such as mirror, magnifying lenses, etc., may be necessary. Surface cleaning and elaborate procedures may be required."

(2) Repeat the inspection required by paragraph (f)(1) of this AD thereafter at intervals not to exceed 48 months.

(3) During any inspection required by paragraph (f)(1) or (f)(2) of this AD, if it is not possible to replace a removed bolt with another bolt having the same part number as a replacement item, before further flight, contact BAE SYSTEMS to replace the removed bolt with an alternative bolt and do the approved BAE SYSTEMS repair.

(4) If during any inspection required by paragraph (f)(1) or (f)(2) of this AD, any discrepancy is found, before further flight, repair in accordance with paragraph 2.C. of the Accomplishment Instructions of BAE SYSTEMS (Operations) Limited Inspection Service Bulletin ISB.53-213, dated May 21, 2008.

(5) Although BAE SYSTEMS (Operations) Limited Inspection Service Bulletin ISB.53-213, dated May 21, 2008, specifies to submit certain information to the manufacturer, this AD does not include that requirement.

### **FAA AD Differences**

Note 2: This AD differs from the MCAI and/or service information as follows: Although BAE SYSTEMS (Operations) Limited Inspection Service Bulletin ISB.53-213, dated May 21, 2008; and European Aviation Safety Agency (EASA) AD 2009-0046, dated March 2, 2009; specify to submit certain information to the manufacturer, this AD does not include that requirement.

### **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.

### **Related Information**

(h) Refer to MCAI EASA Airworthiness Directive 2009-0046, dated March 2, 2009; and BAE SYSTEMS (Operations) Limited Inspection Service Bulletin ISB.53-213, dated May 21, 2008; for related information.

### **Material Incorporated by Reference**

(i) You must use BAE SYSTEMS (Operations) Limited Inspection Service Bulletin ISB.53-213, dated May 21, 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](mailto: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](http://www.archives.gov/federal_register/code_of_federal_regulations/ibr_locations.html).

Issued in Renton, Washington, on January 14, 2010.

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