

[Federal Register Volume 81, Number 156 (Friday, August 12, 2016)]

[Rules and Regulations]

[Pages 53252-53255]

From the Federal Register Online via the Government Publishing Office [www.gpo.gov]

[FR Doc No: 2016-18821]

---

## **DEPARTMENT OF TRANSPORTATION**

### **Federal Aviation Administration**

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

**[Docket No. FAA-2016-5465; Directorate Identifier 2015-NM-041-AD; Amendment 39-18609; AD 2016-16-11]**

**RIN 2120-AA64**

#### **Airworthiness Directives; BAE Systems (Operations) Limited Airplanes**

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

**ACTION:** Final rule.

---

**SUMMARY:** We are superseding Airworthiness Directive (AD) 2010-10-13, for all BAE Systems (Operations) Limited Model BAe 146 and Avro 146 series airplanes. AD 2010-10-13 required repetitive inspections of the wing fixed leading edge and front spar structure for corrosion and cracking, and repair if necessary. This new AD requires revised inspection procedures that terminate a previously approved inspection procedure. This AD was prompted by revised inspection procedures issued by the Design Approval Holder (DAH). We are issuing this AD to detect and correct corrosion and cracking of the wing fixed leading edge and front spar structure, which could result in reduced structural integrity of the airplane.

**DATES:** This AD is effective September 16, 2016.

The Director of the Federal Register approved the incorporation by reference of a certain publication listed in this AD as of September 16, 2016.

The Director of the Federal Register approved the incorporation by reference of a certain other publication listed in this AD as of June 21, 2010 (75 FR 27419, May 17, 2010).

**ADDRESSES:** For service information identified in this final rule, contact BAE Systems (Operations) Limited, Customer Information Department, Prestwick International Airport, Ayrshire, KA9 2RW, Scotland, United Kingdom; telephone +44 1292 675207; fax +44 1292 675704; email [RApublications@baesystems.com](mailto:RApublications@baesystems.com); Internet <http://www.baesystems.com/Businesses/RegionalAircraft/index.htm>. You may view this referenced service information at the FAA, Transport Airplane Directorate, 1601 Lind Avenue SW., Renton, WA. For information on the availability of this material at the FAA, call 425-227-1221. It is also available on the Internet at <http://www.regulations.gov> by searching for and locating Docket No. FAA-2016-5465.

## **Examining the AD Docket**

You may examine the AD docket on the Internet at <http://www.regulations.gov> by searching for and locating Docket No. FAA-2016-5465; or in person at the Docket Management Facility between 9 a.m. and 5 p.m., Monday through Friday, except Federal holidays. The AD docket contains this AD, the regulatory evaluation, any comments received, and other information. The address for the Docket Office (telephone 800-647-5527) is Docket Management Facility, U.S. Department of Transportation, Docket Operations, M-30, West Building Ground Floor, Room W12-140, 1200 New Jersey Avenue SE., Washington, DC 20590.

**FOR FURTHER INFORMATION CONTACT:** Todd Thompson, Aerospace Engineer, International Branch, ANM-116, Transport Airplane Directorate, FAA, 1601 Lind Avenue SW., Renton, WA 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 supersede AD 2010-10-13, Amendment 39-16292 (75 FR 27419, May 17, 2010) ("AD 2010-10-13"). AD 2010-10-13 applied to all BAE Systems (Operations) Limited Model BAe 146 and Avro 146 series airplanes. The NPRM published in the Federal Register on April 20, 2016 (81 FR 23208) ("the NPRM"). The NPRM was prompted by revised inspection procedures issued by the DAH. The NPRM proposed to continue to require repetitive inspections of the wing fixed leading edge and front spar structure for corrosion and cracking, and repair if necessary. The NPRM also proposed to require revised inspection procedures that terminate a previously approved inspection procedure. We are issuing this AD to detect and correct corrosion and cracking of the wing fixed leading edge and front spar structure, which could result in reduced structural integrity of the airplane.

The European Aviation Safety Agency (EASA), which is the Technical Agent for the Member States of the European Union, has issued EASA Airworthiness Directive 2014-0047; corrected February 26, 2015 (referred to after this as the Mandatory Continuing Airworthiness Information, or "the MCAI"); to correct an unsafe condition. The MCAI states:

Corrosion of the wing fixed leading edge structure was detected on a BAe 146 aeroplane during removal of wing removable edge for a repair. The review of available scheduled tasks intended to detect environmental and fatigue deteriorations of the wing revealed that they may not have been sufficient to identify corrosion or fatigue damage in the affected structural area.

This condition, if not detected and corrected, could lead to degradation of the structural integrity of the wing.

To address this potential unsafe condition, EASA issued AD 2009-0014 [which corresponds to FAA AD 2010-10-13] to require repetitive inspections of fixed wing leading edge and front spar structure [for cracking and corrosion, and repair if necessary] in accordance with BAE Systems (Operations) Ltd Inspection Service Bulletin (ISB) ISB.57-072 which incorporated two possible inspection procedures, either method 1, a combination of a detailed visual inspection (DVI) and a visual inspection (VI) after removal of the outer fixed leading edge only, or method 2, a DVI only, after removal of the inner, centre and outer fixed leading edges.

Since that [EASA] AD was issued, BAE Systems (Operations) Ltd issued ISB.57-072 Revision 1 to correct a material reference number, Revision 2, which removed method 1 as an available inspection procedure to detect fatigue and environmental damage of the wing structure and Revision 3 to delete the requirement to install weights if the engines were removed when the leading edges were removed.

For the reasons described above, this [EASA] AD retains the requirements of EASA AD 2009-0014, which is superseded, but requires accomplishment of the [repetitive] inspections in accordance with updated inspection procedures, i.e. method 2 only.

This [EASA] AD is re-published to correct a typographical error in Table 1, restoring a compliance time as previously required by EASA AD 2009-0014.

The repetitive inspection interval for the detailed visual inspection for cracking and corrosion of the wing fixed leading edge and front spar structure is:

- 12 years or 36,000 flight cycles, whichever occurs earlier, for airplanes on which the enhanced corrosion protection has not been accomplished.
- 6 years or 36,000 flight cycles, whichever occurs earlier, for airplanes on which the enhanced corrosion protection has been accomplished.

You may examine the MCAI in the AD docket on the Internet at <http://www.regulations.gov> by searching for and locating Docket No. FAA-2016-5465.

## **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 this AD as proposed except for minor editorial changes. We have determined that these minor changes:

- Are consistent with the intent that was proposed in the NPRM for correcting the unsafe condition; and
- Do not add any additional burden upon the public than was already proposed in the NPRM.

## **Related Service Information Under 1 CFR Part 51**

BAE Systems (Operations) Limited has issued Service Bulletin ISB.57-072, Revision 3, dated August 31, 2010. The service information describes procedures for inspection and repair for cracking and corrosion of the wing fixed leading edge and front spar structure. This service information is reasonably available because the interested parties have access to it through their normal course of business or by the means identified in the ADDRESSES section.

## **Costs of Compliance**

We estimate that this AD affects 4 airplanes of U.S. registry.

The actions required by AD 2010-10-13, and retained in this AD take about 12 work-hours per product, and 1 work-hour per product for reporting, at an average labor rate of \$85 per work-hour. Based on these figures, the estimated cost of the actions that are required by AD 2010-10-13 is \$1,105 per product.

The new requirements of this AD add no additional economic burden.

We have received no definitive data that would enable us to provide cost estimates for the on-condition actions specified in this AD.

### **Paperwork Reduction Act**

A federal agency may not conduct or sponsor, and a person is not required to respond to, nor shall a person be subject to penalty for failure to comply with a collection of information subject to the requirements of the Paperwork Reduction Act unless that collection of information displays a current valid OMB control number. The control number for the collection of information required by this AD is 2120-0056. The paperwork cost associated with this AD has been detailed in the Costs of Compliance section of this document and includes time for reviewing instructions, as well as completing and reviewing the collection of information. Therefore, all reporting associated with this AD is mandatory. Comments concerning the accuracy of this burden and suggestions for reducing the burden should be directed to the FAA at 800 Independence Ave. SW., Washington, DC 20591, ATTN: Information Collection Clearance Officer, AES-200.

### **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 that 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);
3. Will not affect intrastate aviation in Alaska; and
4. 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.

### **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 Airworthiness Directive (AD) 2010-10-13, Amendment 39-16292 (75 FR 27419, May 17, 2010), and adding the following new AD:



---

**2016-16-11 BAE Systems (Operations) Limited:** Amendment 39-18609. Docket No. FAA-2016-5465; Directorate Identifier 2015-NM-041-AD.

**(a) Effective Date**

This AD is effective September 16, 2016.

**(b) Affected ADs**

This AD replaces AD 2010-10-13, Amendment 39-16292 (75 FR 27419, May 17, 2010) ("AD 2010-10-13").

**(c) Applicability**

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 serial numbers.

**(d) Subject**

Air Transport Association (ATA) of America Code 57, Wings.

**(e) Reason**

This AD was prompted by revised inspection procedures issued by the Design Approval Holder. We are issuing this AD to detect and correct corrosion and cracking of the wing fixed leading edge and front spar structure, which could result in reduced structural integrity of the airplane.

**(f) Compliance**

Comply with this AD within the compliance times specified, unless already done.

**(g) Retained Actions and Compliance, With Added Provision for Terminating Action**

This paragraph restates the requirements of paragraph (f) of AD 2010-10-13, with an added provision for terminating action. Accomplishing the initial inspection required by paragraph (j) of this AD terminates the requirements of paragraph (g) of this AD.

(1) At the applicable time identified in paragraph (g)(1)(i), (g)(1)(ii), or (g)(1)(iii) of this AD: Perform a detailed visual inspection and visual inspection (Method 1) or a detailed visual inspection (Method 2) for cracking and corrosion of the wing fixed leading edge and front spar structure, in accordance with paragraph 2.C. or 2.D., as applicable, of the Accomplishment Instructions of BAE Systems (Operations) Limited Inspection Service Bulletin ISB.57-072, Revision 1, dated September 25, 2008.

(i) For airplanes with less than 9 years since the date of issuance of the original airworthiness certificate or the date of issuance of the original export certificate of airworthiness as of the effective date of this AD: Within 18 months after June 21, 2010 (the effective date of AD 2010-10-13).

(ii) For airplanes with 9 years or more, but less than 15 years, since the date of issuance of the original airworthiness certificate or the date of issuance of the original export certificate of airworthiness as of June 21, 2010 (the effective date of AD 2010-10-13): Within 18 months after June 21, 2010, or within 16 years since the date of issuance of the original airworthiness certificate or the date of issuance of the original export certificate of airworthiness, whichever occurs first.

(iii) For airplanes with 15 years or more since the date of issuance of the original airworthiness certificate or the date of issuance of the original export certificate of airworthiness as of June 21, 2010 (the effective date of AD 2010-10-13): Within 6 months after June 21, 2010.

(2) After doing the initial inspection required by paragraph (g)(1) of this AD, at the applicable intervals specified in paragraph (g)(2)(i) or (g)(2)(ii) of this AD, accomplish the repetitive inspections of the wing fixed leading edge and front spar structure for cracking and corrosion in the "area of inspection" specified in table 1 of paragraph 1.D., "Compliance," of BAE Systems (Operations) Limited Inspection Service Bulletin ISB.57-072, Revision 1, dated September 25, 2008. Do the inspections in accordance with paragraph 2.C. (Method 1) or paragraph 2.D. (Method 2) of the Accomplishment Instructions of BAE SYSTEMS (Operations) Limited Inspection Service Bulletin ISB.57-072, Revision 1, dated September 25, 2008. Where previously applied, enhanced corrosion protection may then be re-applied, as an option, in accordance with paragraph 2.E. of the Accomplishment Instructions of BAE Systems (Operations) Limited Inspection Service Bulletin ISB.57-072, Revision 1, dated September 25, 2008. Perform the repetitive inspections at the times specified in paragraph (g)(2)(i) or (g)(2)(ii) of this AD, as applicable.

(i) For airplanes having enhanced corrosion protection that was applied during the previous inspection: Inspect at intervals not to exceed 144 months.

(ii) For airplanes not having enhanced corrosion protection that was applied during the previous inspection: Inspect at intervals not to exceed 72 months.

(3) After doing the initial inspection required by paragraph (g)(1) of this AD, at intervals not to exceed 36,000 flight cycles, accomplish fatigue inspections in accordance with paragraph 2.C. (Method 1) or paragraph 2.D. (Method 2) of the Accomplishment Instructions of BAE Systems (Operations) Limited Inspection Service Bulletin ISB.57-072, Revision 1, dated September 25, 2008.

(4) If any cracking or corrosion is found during any inspection required by paragraph (g) of this AD, before further flight, repair in accordance with the Accomplishment Instructions of BAE Systems (Operations) Limited Inspection Service Bulletin ISB.57-072, Revision 1, dated September 25, 2008.

(5) No repair terminates the inspection requirements of this AD.

(6) Actions done before June 21, 2010 (the effective date of AD 2010-10-13), in accordance with BAE Systems (Operations) Limited Inspection Service Bulletin ISB.57-072, dated February 22, 2008, are considered acceptable for compliance with the corresponding actions specified in this AD.

(7) Submit a report of the findings (both positive and negative) of the inspection required by paragraph (f)(1) of this AD to Customer Liaison, Customer Support (Building 37), BAE Systems (Operations) Limited, Prestwick International Airport, Ayrshire, KA9 2RW, Scotland; fax +44 (0) 1292 675432; email raengliaison@baesystems.com, at the applicable time specified in paragraphs (g)(7)(i) and (g)(7)(ii) of this AD. The report must include the inspection results, a description of any discrepancies found, the airplane serial number, and the number of landings and flight hours on the airplane.

(i) If the inspection was done on or after June 21, 2010 (the effective date of AD 2010-10-13): Submit the report within 30 days after the inspection.

(ii) If the inspection was done before June 21, 2010 (the effective date of AD 2010-10-13): Submit the report within 30 days after June 21, 2010.

#### **(h) Retained Corrosion Protection Information, With No Changes**

This paragraph restates the corrosion protection information in Note 2 of AD 2010-10-13, with no changes. At the discretion of the airplane owner/operator, corrosion protection may be embodied on those areas subject to a detailed visual inspection, in accordance with paragraph 2.E. or paragraph 2.F. of the Accomplishment Instructions of BAE Systems (Operations) Limited Inspection Service Bulletin ISB.57-072, Revision 1, dated September 25, 2008. Embodiment of enhanced corrosion protection in accordance with paragraph 2.E. of the Accomplishment Instructions of BAE Systems (Operations) Limited Inspection Service Bulletin ISB.57-072, Revision 1, dated September 25, 2008, allows the interval of the repetitive inspections (as required by paragraph (g)(2) of this AD) to be extended in the area(s) of application in accordance with paragraph (g)(2)(i) or (g)(2)(ii) of this AD, as applicable.

#### **(i) Retained Inspection Information, With No Changes**

This paragraph restates the inspection information in Note 3 of AD 2010-10-13, with no changes. The inspections required by this AD prevail over the Maintenance Review Board Report (MRBR), Maintenance Planning Document (MPD), Corrosion Prevention and Control Program (CPCP), and Supplemental Structural Inspection Document (SSID) inspections defined in paragraph 1.C.(3) of BAE Systems (Operations) Limited Inspection Service Bulletin ISB.57-072, Revision 1, dated September 25, 2008.

#### **(j) New Requirement of This AD: Repetitive Inspection**

At the applicable time identified in paragraph (j)(1), (j)(2), or (j)(3) of this AD; or within 6 months after the effective date of this AD; whichever occurs later: Perform a detailed visual inspection for cracking and corrosion of the wing fixed leading edge and front spar structure, in accordance with paragraph 2.C. of the Accomplishment Instructions of BAE Systems (Operations) Limited Inspection Service Bulletin ISB.57-072, Revision 3, dated August 31, 2010. Repeat the inspection thereafter at the applicable intervals specified in paragraph 1.D.2. of BAE Systems (Operations) Limited Inspection Service Bulletin ISB.57-072, Revision 3, dated August 31, 2010. Accomplishing the initial inspection required by this paragraph terminates the requirements of paragraph (g) of this AD.

(1) For airplanes with less than 9 years since the date of issuance of the original airworthiness certificate or the date of issuance of the original export certificate of airworthiness as of June 21, 2010 (the effective date of AD 2010-10-13): Within 18 months after June 21, 2010, or within 9 years since the date of issuance of the original airworthiness certificate or the date of issuance of the original export certificate of airworthiness, whichever occurs later.

(2) For airplanes with 9 years or more, but less than 15 years, since the date of issuance of the original airworthiness certificate or the date of issuance of the original export certificate of airworthiness as of June 21, 2010 (the effective date of AD 2010-10-13): Within 18 months after June 21, 2010, or within 16 years since the date of issuance of the original airworthiness certificate or the date of issuance of the original export certificate of airworthiness, whichever occurs first.

(3) For airplanes with 15 years or more since the date of issuance of the original airworthiness certificate or the date of issuance of the original export certificate of airworthiness as of June 21, 2010 (the effective date of AD 2010-10-13): Within 6 months after June 21, 2010.

#### **(k) New Requirement of This AD: Repair**

If any crack or corrosion is found during any inspection required by paragraph (j) of this AD: Before further flight, repair using a method approved by the Manager, International Branch, ANM-

116, Transport Airplane Directorate, FAA; or the European Aviation Safety Agency (EASA); or BAE Systems (Operations) Limited's EASA Design Organization Approval (DOA).

**(l) No Provisions for Terminating Action**

Accomplishment of any repair, as required by paragraph (k) of this AD, does not constitute terminating action for inspections required by this AD.

**(m) Credit for Previous Actions**

This paragraph provides credit for actions required by this AD, if those actions were performed before the effective date of this AD using BAE Systems (Operations) Limited Inspection Service Bulletin ISB.57-072, dated February 22, 2008; or BAE Systems (Operations) Limited Inspection Service Bulletin ISB.57-072, Revision 1, dated September 25, 2008.

**(n) Other FAA AD Provisions**

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. In accordance with 14 CFR 39.19, send your request to your principal inspector or local Flight Standards District Office, as appropriate. If sending information directly to the International Branch, send it to ATTN: Todd Thompson, Aerospace Engineer, International Branch, ANM-116, Transport Airplane Directorate, FAA, 1601 Lind Avenue SW., Renton, WA 98057-3356; telephone 425-227-1175; fax 425-227-1149. Information may be emailed to: 9-ANM-116-AMOC-REQUESTS@faa.gov. Before using any approved AMOC, notify your appropriate principal inspector, or lacking a principal inspector, the manager of the local flight standards district office/certificate holding district office.

(2) Contacting the Manufacturer: As of the effective date of this AD, for any requirement in this AD to obtain corrective actions from a manufacturer, the action must be accomplished using a method approved by the Manager, International Branch, ANM-116, Transport Airplane Directorate, FAA; or the EASA; or BAE Systems (Operations) Limited's EASA DOA. If approved by the DOA, the approval must include the DOA-authorized signature.

(3) Reporting Requirements: A federal agency may not conduct or sponsor, and a person is not required to respond to, nor shall a person be subject to a penalty for failure to comply with a collection of information subject to the requirements of the Paperwork Reduction Act unless that collection of information displays a current valid OMB Control Number. The OMB Control Number for this information collection is 2120-0056. Public reporting for this collection of information is estimated to be approximately 5 minutes per response, including the time for reviewing instructions, completing and reviewing the collection of information. All responses to this collection of information are mandatory. Comments concerning the accuracy of this burden and suggestions for reducing the burden should be directed to the FAA at: 800 Independence Ave. SW., Washington, DC 20591, Attn: Information Collection Clearance Officer, AES-200.

**(o) Related Information**

(1) Refer to Mandatory Continuing Airworthiness Information (MCAI) EASA Airworthiness Directive 2014-004; corrected February 26, 2015; for related information. This MCAI may be found in the AD docket on the Internet at <http://www.regulations.gov> by searching for and locating Docket No. FAA-2016-5465.

(2) Service information identified in this AD that is not incorporated by reference is available at the addresses specified in paragraphs (p)(5) and (p)(6) of this AD.

**(p) Material Incorporated by Reference**

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

(2) You must use this service information as applicable to do the actions required by this AD, unless this AD specifies otherwise.

(3) The following service information was approved for IBR on September 16, 2016.

(i) BAE Systems (Operations) Limited Inspection Service Bulletin ISB.57-072, Revision 3, dated August 31, 2010.

(ii) Reserved.

(4) The following service information was approved for IBR on June 21, 2010 (75 FR 27419, May 17, 2010).

(i) BAE Systems (Operations) Limited Inspection Service Bulletin ISB.57-072, Revision 1, dated September 25, 2008.

(ii) Reserved.

(5) For service information identified in this AD, contact BAE Systems (Operations) Limited, Customer Information Department, Prestwick International Airport, Ayrshire, KA9 2RW, Scotland, United Kingdom; telephone +44 1292 675207; fax +44 1292 675704; email [RApublications@baesystems.com](mailto:RApublications@baesystems.com); Internet <http://www.baesystems.com/Businesses/RegionalAircraft/index.htm>.

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

(7) You may view this 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/cfr/ibr-locations.html>.

Issued in Renton, Washington, on July 27, 2016.

Victor Wicklund,  
Acting Manager, Transport Airplane Directorate,  
Aircraft Certification Service.