



[4910-13-P]

DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

14 CFR Part 39

[Docket No. FAA-2013-0627; Directorate Identifier 2012-NM-021-AD]

RIN 2120-AA64

Airworthiness Directives; BAE SYSTEMS (OPERATIONS) LIMITED Airplanes

AGENCY: Federal Aviation Administration (FAA), DOT.

ACTION: Notice of proposed rulemaking (NPRM).

SUMMARY: We propose to supersede an existing airworthiness directive (AD) that applies to all BAE SYSTEMS (OPERATIONS) LIMITED Model BAe 146 series airplanes and Model Avro 146-RJ series airplanes. The existing AD currently requires revising the maintenance program by incorporating certain airworthiness limitations that require new life limits on certain main landing gear (MLG) components. Since we issued that AD, we have determined that reduced safe life limits on certain nose landing gear (NLG) fittings are necessary. Analysis of these fittings showed the presence of forging indications in the flash line, which might reduce the life limits of these fittings.

This proposed AD would require revising the maintenance program to incorporate certain limitations. We are proposing this AD to prevent fatigue cracking of certain structural elements, which could adversely affect the structural integrity of the airplane.

DATES: We must receive comments on this proposed AD by [INSERT DATE 45 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER].

ADDRESSES: You may send comments by any of the following methods:

- Federal eRulemaking Portal: Go to <http://www.regulations.gov>. Follow the instructions for submitting comments.
- Fax: (202) 493-2251.
- Mail: U.S. Department of Transportation, Docket Operations, M-30, West Building Ground Floor, Room W12-140, 1200 New Jersey Avenue SE., Washington, DC 20590.
- Hand Delivery: U.S. Department of Transportation, Docket Operations, M-30, West Building Ground Floor, Room W12-140, 1200 New Jersey Avenue SE., Washington, DC, between 9 a.m. and 5 p.m., Monday through Friday, except Federal holidays.

For BAE SYSTEMS service information identified in this proposed 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; Internet

<http://www.baesystems.com/Businesses/RegionalAircraft/index.htm>. For Messier-Dowty service information identified in this proposed AD, contact Messier-Dowty: Messier Services Americas, Customer Support Center, 45360 Severn Way, Sterling, Virginia 20166-8910; telephone 703-450-8233; fax 703-404-1621; Internet

<https://techpubs.services/messier-dowty.com>. You may review copies of the 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.

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 this proposed AD, 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.

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:

Comments Invited

We invite you to send any written relevant data, views, or arguments about this proposed AD. Send your comments to an address listed under the ADDRESSES section. Include “Docket No. FAA-2013-0627; Directorate Identifier 2012-NM-021-AD” at the beginning of your comments. We specifically invite comments on the overall regulatory, economic, environmental, and energy aspects of this proposed AD. We will consider all comments received by the closing date and may amend this proposed AD based on those comments.

We will post all comments we receive, without change, to <http://www.regulations.gov>, including any personal information you provide. We will also post a report summarizing each substantive verbal contact we receive about this proposed AD.

Discussion

On November 8, 2011, we issued AD 2011-24-06, Amendment 39-16870 (76 FR 73477, November 29, 2011), which superseded AD 2010-10-22, Amendment 39-16301 (75 FR 28463, May 21, 2010). AD 2011-24-06 required actions intended to address an unsafe condition on the products listed above.

Since we issued AD 2011-24-06, Amendment 39-16870 (76 FR 73477, November 29, 2011), we have determined that reduced safe life limits on certain NLG fittings are necessary. Analysis of these fittings showed the presence of forging indications in the flash line, which might reduce the life limits of these fittings. In addition, the aircraft maintenance manual has been revised to redefine the operating time of the aileron and elevator dampers. The European Aviation Safety Agency (EASA), which is the Technical Agent for the Member States of the European Community, has issued EASA Airworthiness Directive 2012-0004, dated January 12, 2012 (referred to after this as “the MCAI”), to correct an unsafe condition for the specified products. The MCAI states:

* * * Compliance with [certain chapters of the BAe 146/AVRO 146-RJ Aircraft Maintenance Manual (AMM)] has been identified as a mandatory action for continued airworthiness and EASA AD 2011-0048 was issued to require operators to comply with those instructions.

* * * * *

Failure to comply with these instructions could result in an unsafe condition.

For the reasons described above, this EASA AD retains the requirements of EASA AD 2011-0048 [which corresponds to FAA AD 2011-24-06, Amendment 39-16870 (76 FR 73477, November 29, 2011)], which is superseded, and requires the implementation of the new or more restrictive maintenance requirements and/or airworthiness limitations as specified in * * * [certain] sub-chapters of Chapter 05 of the AMM at Revision 105 * * *.

The unsafe condition is fatigue cracking of certain structural elements, which could adversely affect the structural integrity of the airplane. You may obtain further information by examining the MCAI in the AD docket.

Relevant Service Information

BAE SYSTEMS (OPERATIONS) LIMITED has issued the following service information. The actions described in this service information are intended to correct the unsafe condition identified in the MCAI.

- Subject 05-10-15, “Aircraft Equipment Airworthiness Limitations,” of Chapter 05, “Time Limits/Maintenance Checks,” of BAe 146 Series/AVRO 146-RJ Series Aircraft Maintenance Manual, Revision 105, dated July 15, 2011.
- Subject 05-20-02, “Airframe Scheduled Maintenance – Landing/Calendar Life Extended,” of Chapter 05, “Time Limits/Maintenance Checks,” of BAe 146 Series/AVRO 146-RJ Series Aircraft Maintenance Manual, Revision 105, dated July 15, 2011.

- Subject 05-20-05, “Airframe Scheduled Maintenance – Life Extension Programme Landings Life Extended,” of Chapter 05, “Time Limits/Maintenance Checks,” of BAe 146 Series/AVRO 146-RJ Series Aircraft Maintenance Manual, Revision 105, dated July 15, 2011.

FAA’s Determination and Requirements of This Proposed AD

This product has been approved by the aviation authority of another country, and is approved for operation in the United States. Pursuant to our bilateral agreement with the State of Design Authority, we have been notified of the unsafe condition described in the MCAI and service information referenced above. We are proposing this AD because we evaluated all pertinent information and determined an unsafe condition exists and is likely to exist or develop on other products of the same type design.

This AD requires revisions to certain operator maintenance documents to include new actions (e.g., inspections) and/or Critical Design Configuration Control Limitations (CDCCLs). Compliance with these actions and/or CDCCLs is required by 14 CFR 91.403(c). For airplanes that have been previously modified, altered, or repaired in the areas addressed by this AD, the operator may not be able to accomplish the actions described in the revisions. In this situation to comply with 14 CFR 91.403(c), the operator must request approval of an alternative method of compliance (AMOC) according to paragraph (n) of this AD. The request should include a description of changes to the required actions that will ensure the continued operational safety of the airplane.

Costs of Compliance

Based on the service information, we estimate that this proposed AD would affect about 2 products of U.S. registry.

The actions that are required by AD 2011-24-06, Amendment 39-16870 (76 FR 73477, November 29, 2011), and retained in this proposed AD take about 2 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 \$170 per product.

We estimate that it would take about 1 work-hour per product to comply with the new basic requirements of this proposed AD. The average labor rate is \$85 per work-hour. Based on these figures, we estimate the cost of the proposed AD on U.S. operators to be up to \$170, or \$85 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 proposed AD would not have federalism implications under Executive Order 13132. This proposed AD would 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 proposed regulation:

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.

We prepared a regulatory evaluation of the estimated costs to comply with this proposed AD and placed it in the AD docket.

List of Subjects in 14 CFR Part 39

Air transportation, Aircraft, Aviation safety, Incorporation by reference, Safety.

The Proposed Amendment

Accordingly, under the authority delegated to me by the Administrator, the FAA proposes to amend 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) 2011-24-06, Amendment 39-16870 (76 FR 73477, November 29, 2011), and adding the following new AD:

BAE SYSTEMS (OPERATIONS) LIMITED: Docket No. FAA-2013-0627;

Directorate Identifier 2012-NM-021-AD.

(a) Comments Due Date

We must receive comments by [INSERT DATE 45 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER].

(b) Affected ADs

This AD supersedes AD 2011-24-06, Amendment 39-16870 (76 FR 73477, November 29, 2011).

(c) Applicability

This AD applies to all BAE SYSTEMS (OPERATIONS) LIMITED Model BAe 146-100A, -200A, and -300A airplanes; and Model Avro 146-RJ70A, 146-RJ85A, and 146-RJ100A airplanes; certificated in any category.

(d) Subject

Air Transport Association (ATA) of America Code 05.

(e) Reason

This AD was prompted by a determination that reduced safe life limits on certain NLG fittings are necessary. We are issuing this AD to prevent fatigue cracking of certain structural elements, which could adversely affect the structural integrity of the airplane.

(f) Compliance

You are responsible for having the actions required by this AD performed within the compliance times specified, unless the actions have already been done.

(g) Retained Airworthiness Limitations Revisions

(1) This paragraph restates the requirements of paragraph (g) of AD 2011-24-06, Amendment 39-16870 (76 FR 73477, November 29, 2011). Within 90 days after June 25, 2010 (the effective date of AD 2010-10-22, Amendment 39-16301 (75 FR 28463, May 21, 2010)), revise the maintenance program, by incorporating Chapter 5 of the BAE SYSTEMS (Operations) Limited BAe146 Series/Avro 146-RJ Series Aircraft Maintenance Manual (AMM) to incorporate new and more restrictive life limits for certain items and new and more restrictive inspections to detect fatigue cracking in certain structures, and to add fuel system (CDCCLs to prevent ignition sources in the fuel tanks, in accordance with a method approved by the Manager, International Branch, ANM-116, Transport Airplane Directorate, FAA; or the European Aviation Safety Agency (EASA) (or its delegated agent).

(2) This paragraph restates the provisions of Note 2 of AD 2011-24-06, Amendment 39-16870 (76 FR 73477, November 29, 2011). Guidance on revising Chapter 5 of the BAE SYSTEMS (Operations) Limited BAe146 Series/Avro 146-RJ

Series AMM, Revision 97, dated July 15, 2009, can be found in the applicable sub-chapters listed in Table 1 to paragraph (g)(2) of this AD.

Table 1 to Paragraph (g)(2) of this AD - *Applicable AMM Sub-chapters*

AMM Sub-chapter	Subject
05-10-01	Airframe Airworthiness Limitations before Life Extension Programme
05-10-05 ¹	Airframe Airworthiness Limitations, Life Extension Programme Landings Life Extended
05-10-10 ²	Airframe Airworthiness Limitations, Life Extension Programme Calendar Life Extended
05-10-15	Aircraft Equipment - Airworthiness Limitations
05-10-17	Power Plant Airworthiness Limitations
05-15-00	Critical Design Configuration Control Limitations (CDCCL) - Fuel System Description and Operation
05-20-00 ³	Scheduled Maintenance
05-20-01	Airframe Scheduled Maintenance – Before Life Extension Programme
05-20-05 ¹	Airframe Scheduled Maintenance – Life Extension Programme Landings Life Extended
05-20-10 ²	Airframe Scheduled Maintenance – Life Extension Programme Calendar Life Extended
05-20-15	Aircraft Equipment Scheduled Maintenance

¹ Applicable only to airplanes post-modification HCM20011A or HCM20012A or HCM20013A.

² Applicable only to airplanes post-modification HCM20010A.

³ Paragraphs 5 and 6 only, on the Corrosion Prevention and Control Program (CPCP) and the Supplemental Structural Inspection Document (SSID).

(3) This paragraph restates the provisions of Note 3 of AD 2011-24-06, Amendment 39-16870 (76 FR 73477, November 29, 2011). Sub-chapter 05-15-00 of the BAE SYSTEMS (Operations) Limited BAe146 Series/Avro 146-RJ Series AMM, is the CDCCL.

(4) This paragraph restates the provisions of Note 4 of AD 2011-24-06, Amendment 39-16870 (76 FR 73477, November 29, 2011). Within Sub-chapter 05-20-00 of the BAE SYSTEMS (Operations) Limited BAe146 Series/Avro 146-RJ Series AMM, the relevant issues of the support documents are as follows: BAE SYSTEMS (Operations) Limited BAe 146 Series/Avro 146-RJ Corrosion Prevention and Control Program Document CPCP-146-01, Revision 3, dated July 15, 2008, including BAE SYSTEMS (Operations) Limited Temporary Revision (TR) 2.1, dated December 2008; and BAE SYSTEMS (Operations) Limited BAe146 Series Supplemental Structural Inspection Document SSID-146-01, Revision 1, dated June 15, 2009.

(5) This paragraph restates the provisions of Note 5 of AD 2011-24-06, Amendment 39-16870 (76 FR 73477, November 29, 2011). Within Sub-chapter 05-20-01 of the BAE SYSTEMS (Operations) Limited BAe146 Series/Avro146-RJ Series AMM, the relevant issue of BAE SYSTEMS (Operations) Limited BAe 146/Avro 146-RJ Maintenance Review Board Report Document MRB 146-01, Issue 2, is Revision 15, dated March 2009 (mis-identified in EASA AD 2009-0215, dated October 7, 2009, as being dated May 2009).

(6) This paragraph restates the provisions of Note 6 of AD 2011-24-06, Amendment 39-16870 (76 FR 73477, November 29, 2011). Notwithstanding any other maintenance or operational requirements, components that have been identified as airworthy or installed on the affected airplanes before revision of Chapter 5 of the AMM, as required by paragraph (g) of this AD, do not need to be reworked in accordance with the CDCCLs. However, once the Airworthiness Limitations Section (ALS) or AMM has been revised, future maintenance actions on these components must be done in accordance with the CDCCLs.

(h) Retained Restriction of Alternative Actions, Intervals, and/or CDCCLs

This paragraph restates the requirements of paragraph (h) of AD 2011-24-06, Amendment 39-16870 (76 FR 73477, November 29, 2011). Except as specified in paragraphs (i) and (j) of this AD and required by paragraph (l) of this AD: After the actions specified in paragraph (g) of this AD have been accomplished, no alternative inspections or inspection intervals may be approved for the structural elements specified in the documents listed in paragraph (g) of this AD unless the actions, intervals, and/or CDCCLs are approved as an alternative method of compliance (AMOC) in accordance with the procedures specified in paragraph (n) of this AD.

(i) Retained Modification

This paragraph restates the provisions of paragraph (i) of AD 2011-24-06, Amendment 39-16870 (76 FR 73477, November 29, 2011). Modifying the main fittings of the main landing gear in accordance with Messier-Dowty Service Bulletin 146-32-171, dated August 11, 2009, extends the safe limit of the main landing gear main fitting from 32,000 landings to 50,000 landings on the main fitting.

(j) Retained Airworthiness Limitations Revisions

This paragraph restates the requirements of paragraph (j) of AD 2011-24-06, Amendment 39-16870 (76 FR 73477, November 29, 2011). Within 90 days after January 3, 2012 (the effective date of AD 2011-24-06), revise the maintenance program, by incorporating Subject 05-10-15, “Aircraft Equipment Airworthiness Limitations” of Chapter 05, “Time Limits/Maintenance Checks,” of the BAE SYSTEMS (Operations) Limited BAe 146 Series/Avro 146-RJ Series AMM, Revision 104, dated April 15, 2011, to remove life limits on shock absorber assemblies, but not on the individual shock absorber components, amend life limits on MLG up-locks and door up-locks, and to introduce and amend life limits on MLG components. Incorporating the new life limits and inspections into the maintenance program terminates the requirements of

paragraph (g) of this AD for Subject 05-10-15, “Aircraft Equipment Airworthiness Limitations” of Chapter 05, “Time Limits/Maintenance Checks,” of the BAE SYSTEMS (Operations) Limited BAe 146 Series/Avro 146-RJ Series AMM, Revision 104, dated April 15, 2011, and after incorporation has been done, the limitations required by paragraph (g) of this AD for Subject 05-10-15, “Aircraft Equipment Airworthiness Limitations” of Chapter 05, “Time Limits/Maintenance Checks,” of the BAE SYSTEMS (Operations) Limited BAe 146 Series/Avro 146-RJ Series AMM, Revision 104, dated April 15, 2011, may be removed from the maintenance program.

(k) Retained Restriction of Alternative Actions, Intervals, and/or CDCCLs

This paragraph restates the requirements of paragraph (k) of AD 2011-24-06, Amendment 39-16870 (76 FR 73477, November 29, 2011). Except as required by paragraph (l) of this AD, after accomplishing the revision required by paragraph (j) of this AD, no alternative actions (e.g., inspections), intervals, and/or CDCCLs may be used, unless the actions, intervals, and/or CDCCLs are approved as an alternative method of compliance (AMOC) in accordance with the procedures specified in paragraph (n) of this AD.

(l) New Airworthiness Limitation Revision

Within 90 days after the effective date of this AD, revise the maintenance program, by incorporating Chapter 05, “Time Limits/Maintenance Checks,” of the BAE SYSTEMS (Operations) Limited BAe 146 Series/Avro 146-RJ Series AMM, Revision 105, dated July 15, 2011, into the maintenance program. The initial compliance time for the replacement of any part having a new or revised life limit is at the applicable time specified in Chapter 05, “Time Limits/Maintenance Checks,” of the BAE SYSTEMS (Operations) Limited BAe 146 Series/Avro 146-RJ Series AMM,

Revision 105, dated July 15, 2011, or within 90 days after the effective date of this AD, whichever occurs later.

(1) Within Sub-chapter 05-20-00 of the BAE SYSTEMS (Operations) Limited BAe146 Series/Avro 146-RJ Series AMM, supporting documents are BAE SYSTEMS (Operations) Limited CPCP Document CPCP-146-01, Revision 4, dated September 15, 2010; and BAE SYSTEMS (Operations) Limited Supplemental Structural Inspection Document (SSID) Document SSID-146-01/02/03, dated July 12, 2006.

(2) Within Sub-chapter 05-20-01 of the BAE SYSTEMS (Operations) Limited BAe146 Series/Avro146-RJ Series AMM, the supporting document is BAE SYSTEMS (Operations) Limited Maintenance Review Board Report (MRBR) Document MRB 146-01, Issue 2, Revision 17, dated March 2011.

(m) No Alternative Actions, Intervals, and/or CDCCLs

After accomplishing the revision required by paragraph (l) of this AD, no alternative actions (e.g., inspections), intervals, and/or CDCCLs may be used, unless the actions, intervals, and/or CDCCLs are approved as an AMOC in accordance with the procedures specified in paragraph (n) of this AD.

(n) Other FAA AD Provisions

The following provisions also apply to this AD:

(1) Alternative Methods of Compliance (AMOCs): The Manager, International Branch, 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. 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.

(o) Related Information

(1) Refer to mandatory continuing airworthiness information EASA Airworthiness Directive 2012-0004, dated January 12, 2012; and Chapter 05, “Time Limits/Maintenance Checks,” of the BAE SYSTEMS (Operations) Limited BAe 146 Series/Avro 146-RJ Series AMM, Revision 105, dated July 15, 2011; for related information.

(2) For BAE SYSTEMS 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; Internet <http://www.baesystems.com/Businesses/RegionalAircraft/index.htm>. For Messier-Dowty service information identified in this proposed AD, contact Messier-Dowty: Messier Services Americas, Customer Support Center, 45360 Severn Way, Sterling, Virginia 20166-8910; telephone 703-450-8233; fax 703-404-1621; Internet <https://techpubs.services/messier-dowty.com>. You may review copies of the 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.

Issued in Renton, Washington, on July 12, 2013.

Jeffrey E. Duven,
Acting Manager,
Transport Airplane Directorate,
Aircraft Certification Service.

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