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DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

14 CFR Part 39

[Docket No. FAA-2010-0434; Directorate Identifier 2009-NM-221-AD; Amendment 39-16386; AD 2010-16-09]

RIN 2120-AA64

Airworthiness Directives; BAE Systems (Operations) Limited Model BAe 146-100A and -200A 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 operation of the airbrake lever in the "airbrakes out" to "lift spoiler" range has been the subject of two occurrence reports. The lift spoilers on the BAe 146 and Avro 146-RJ aeroplanes have been designed to deploy on landing to provide aerodynamic braking and to dump lift to ensure that the wheel brakes can provide the necessary speed reduction.

* * * * *

The effects of deceleration and landing inertia loads can cause uncommanded movement of the airbrake selector lever from the "lift spoiler" position to the "airbrakes out" position, causing the lift spoilers to retract during the landing roll. This condition, if not corrected, would increase the landing distance, possibly resulting in a runway overrun and consequent injury to aeroplane occupants.

* * * * *

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

DATES: This AD becomes effective September 17, 2010.

The Director of the Federal Register approved the incorporation by reference of a certain publication listed in this AD as of September 17, 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 April 30, 2010 (75 FR 22710). That NPRM proposed to correct an unsafe condition for the specified products. The MCAI states:

The operation of the airbrake lever in the "airbrakes out" to "lift spoiler" range has been the subject of two occurrence reports. The lift spoilers on the BAe 146 and Avro 146-RJ aeroplanes have been designed to deploy on landing to provide aerodynamic braking and to dump lift to ensure that the wheel brakes can provide the necessary speed reduction.

A review of the changing operational profile of the aeroplane type concluded that its proven short field performance has increasingly been exploited in recent years by a number of operators worldwide. Frequently, these short field operations are conducted from airports that are located in mountainous terrain or in close proximity to bodies of water, leaving fewer margins for error, e.g. landing long or at (too) high speed.

The effects of deceleration and landing inertia loads can cause uncommanded movement of the airbrake selector lever from the "lift spoiler" position to the "airbrakes out" position, causing the lift spoilers to retract during the landing roll. This condition, if not corrected, would increase the landing distance, possibly resulting in a runway overrun and consequent injury to aeroplane occupants.

On certain BAe 146 aeroplanes, without modifications HCM00889A and B or modifications HCM00889A and C incorporated, negligible force is required to move the airbrake lever back to the "airbrakes out" position. From 1988 onwards, modifications were introduced on the production line to incorporate a modified friction baulking device such that a force of 12 lbs must be applied to move the airbrake lever from the "lift spoiler" position to the "airbrakes out" position. These modifications were also made available as an optional in-service retrofit.

For the reasons described above, this AD requires the modification of the airbrake lever detent mechanism.

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 Change to Applicability

We have revised the applicability of the existing AD to identify model designations as published in the most recent type certificate data sheet for the affected models.

Conclusion

We reviewed the available data, and determined that air safety and the public interest require adopting the AD with the changes described previously. We determined that these changes 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 11 work-hours per product to comply with the basic requirements of this AD. The average labor rate is \$85 per work-hour. Required parts will cost about \$7,000 per product. Where the service information lists required parts costs that are covered under warranty, we have assumed that there will be no charge for these parts. As we do not control warranty coverage for affected parties, some parties may incur costs higher than estimated here. Based on these figures, we estimate the cost of this AD to the U.S. operator to be \$7,935.

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:



2010-16-09 BAE Systems (Operations) Limited: Amendment 39-16386. Docket No. FAA-2010-0434; Directorate Identifier 2009-NM-221-AD.

Effective Date

- (a) This airworthiness directive (AD) becomes effective September 17, 2010.

Affected ADs

- (b) None.

Applicability

(c) This AD applies to BAE Systems (Operations) Limited Model BAe 146-100A and -200A airplanes, certificated in any category, serial numbers as listed in British Aerospace 146 Modification Service Bulletin 27-73-00889A&B, Revision 4, dated June 15, 1990.

Subject

- (d) Air Transport Association (ATA) of America Code 27: Flight Controls.

Reason

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

The operation of the airbrake lever in the "airbrakes out" to "lift spoiler" range has been the subject of two occurrence reports. The lift spoilers on the BAe 146 and Avro 146-RJ aeroplanes have been designed to deploy on landing to provide aerodynamic braking and to dump lift to ensure that the wheel brakes can provide the necessary speed reduction.

A review of the changing operational profile of the aeroplane type concluded that its proven short field performance has increasingly been exploited in recent years by a number of operators worldwide. Frequently, these short field operations are conducted from airports that are located in mountainous terrain or in close proximity to bodies of water, leaving fewer margins for error, e.g. landing long or at (too) high speed.

The effects of deceleration and landing inertia loads can cause uncommanded movement of the airbrake selector lever from the "lift spoiler" position to the "airbrakes out" position, causing the lift spoilers to retract during the landing roll. This condition, if not corrected, would increase the landing distance, possibly resulting in a runway overrun and consequent injury to aeroplane occupants.

On certain BAe 146 aeroplanes, without modifications HCM00889A and B or modifications HCM00889A and C incorporated, negligible force is required to move

the airbrake lever back to the "airbrakes out" position. From 1988 onwards, modifications were introduced on the production line to incorporate a modified friction baulking device such that a force of 12 lbs must be applied to move the airbrake lever from the "lift spoiler" position to the "airbrakes out" position. These modifications were also made available as an optional in-service retrofit.

For the reasons described above, this AD requires the modification of the airbrake lever detent mechanism.

Compliance

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

Actions

(g) Do the following actions.

(1) Within 12 months after the effective date of this AD, modify the airbrake lever detent mechanism, in accordance with the Accomplishment Instructions of British Aerospace 146 Modification Service Bulletin 27-73-00889A&B, Revision 4, dated June 15, 1990.

(2) Modifying the airbrake lever detent mechanism is also acceptable for compliance with paragraph (g)(1) of this AD, if done before the effective date of this AD, in accordance with the Accomplishment Instructions of British Aerospace 146 Modification Service Bulletin 27-73-00889A&B, Revision 3, dated August 1, 1989.

FAA AD Differences

Note 1: This AD differs from the MCAI and/or service information as follows: While European Aviation Safety Agency (EASA) AD 2009-0206, dated September 30, 2009, considers Revision 0, 1, or 2 of British Aerospace 146 Modification Service Bulletin 27-73-00889A&B as an acceptable method of compliance, this AD does not. However, operators may request approval of an alternative method of compliance in accordance with the procedures specified in paragraph (h)(1) of this AD.

Other FAA AD Provisions

(h) 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 (44 U.S.C. 3501 et seq.), the Office of Management and Budget

(OMB) has approved the information collection requirements and has assigned OMB Control Number 2120-0056.

Related Information

(i) Refer to MCAI EASA Airworthiness Directive 2009-0206, dated September 30, 2009; and British Aerospace 146 Modification Service Bulletin 27-73-00889A&B, Revision 4, dated June 15, 1990; for related information.

Material Incorporated by Reference

(j) You must use British Aerospace 146 Modification Service Bulletin 27-73-00889A&B, Revision 4, dated June 15, 1990, to do the actions required by this AD, unless the AD specifies otherwise. British Aerospace 146 Modification Service Bulletin 27-73-00889A&B, Revision 4, contains the following effective pages:

Page No.	Revision level shown on page	Date shown on page
1, 3-4, 7, 15-16, 19	4	June 15, 1990.
2	3	August 1, 1989.
5, 8-12, 17-18, 20	1	August 10, 1988.
6, 13-14	2	June 27, 1989.

(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 (Operations) Limited, Customer Information Department, Prestwick International Airport, Ayrshire, KA9 2RW, Scotland, United Kingdom; telephone +44 1292 675207; fax +44 1292 675704; e-mail RApublications@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.

(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 28, 2010.

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