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DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

14 CFR Part 39

[Docket No. FAA-2005-21137; Directorate Identifier 2002-NM-86-AD; Amendment 39-14200; AD 2005-15-11]

RIN 2120-AA64

Airworthiness Directives; BAE Systems (Operations) Limited (Jetstream) Model 4101 Airplanes

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

ACTION: Final rule.

SUMMARY: The FAA is adopting a new airworthiness directive (AD) for all BAE Systems (Operations) Limited (Jetstream) Model 4101 airplanes. This AD requires repetitive detailed and specialized inspections to detect fatigue damage in the fuselage, replacement of certain bolt assemblies, and corrective actions if necessary. This AD results from a review of primary airframe fatigue test results and a Maintenance Steering Group 3 (MSG-3) analysis. We are issuing this AD to detect and correct fatigue damage of the fuselage, door, engine nacelle, empennage, and wing structures, which could result in reduced structural integrity of the airplane.

DATES: Effective August 30, 2005.

The Director of the Federal Register approved the incorporation by reference of a certain publication listed in the AD as of August 30, 2005.

ADDRESSES: You may examine the AD docket on the Internet at *http://www.dms.dot.gov* or in person at the Docket Management Facility, U.S. Department of Transportation, 400 Seventh Street SW., Nassif Building, Room PL-401, Washington, DC.

Contact British Aerospace Regional Aircraft American Support, 13850 Mclearen Road, Herndon, Virginia 20171, for service information identified in this AD.

FOR FURTHER INFORMATION CONTACT: Todd Thompson, Aerospace Engineer, International Branch, ANM-116, FAA, Transport Airplane Directorate, 1601 Lind Avenue, SW., Renton, Washington 98055-4056; telephone (425) 227-1175; fax (425) 227-1149.

SUPPLEMENTARY INFORMATION:

Examining the Docket

You may examine the AD docket on the Internet at *http://www.dms.dot.gov* or in person at the Docket Management Facility office between 9 a.m. and 5 p.m., Monday through Friday, except Federal holidays. The Docket Management Facility office (telephone (800) 647-5227) is located on the plaza level of the Nassif Building at the street address stated in the ADDRESSES section.

Discussion

The FAA issued a notice of proposed rulemaking (NPRM) to amend 14 CFR part 39 to include an AD that would apply to all BAE Systems (Operations) Limited (Jetstream) Model 4101 airplanes. That NPRM was published in the Federal Register on May 9, 2005 (70 FR 24326). That NPRM proposed to require repetitive detailed and specialized inspections to detect fatigue damage in the fuselage, replacement of certain bolt assemblies, and corrective actions if necessary.

Comments

We provided the public the opportunity to participate in the development of this AD. We received no comments on the NPRM or on the determination of the cost to the public.

Conclusion

We have carefully reviewed the available data and determined that air safety and the public interest require adopting the AD as proposed.

Costs of Compliance

The following table provides the estimated costs for U.S. operators to comply with this AD.

ESTIMATED COSTS

Action	Work hours	Average labor rate per hour	Parts	Cost per airplane, per inspection cycle	Number of U.S.-registered airplanes	Fleet cost
Inspections of the door structure	17	$65	None	$1,105	57	Up to $62,985, per inspection cycle.
Inspections of the fuselage structure.	164	65	None	10,660	57	Up to $607,620, per inspection/replacement cycle.
Inspections of the engine nacelle structure.	4	65	None	260	57	Up to $14,820, per inspection cycle.
Inspections of the empennage structure.	14	65	None	910	57	Up to $51,870, per inspection cycle.

Action	Work hours	Average labor rate per hour	Parts	Cost per airplane, per inspection cycle	Number of U.S.-registered airplanes	Fleet cost
Inspections of the wing structure	24	65	None	1,560	57	Up to $88,920, per inspection cycle.

In summary, required actions will take about 223 work hours per airplane, at an average labor rate of $65 per work hour. Based on these figures, the estimated cost of the AD for U.S. operators is up to $826,215, or $14,495 per airplane, per inspection cycle.

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 have 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 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. See the ADDRESSES section for a location to examine the regulatory evaluation.

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 Federal Aviation Administration (FAA) amends § 39.13 by adding the following new airworthiness directive (AD):

AIRWORTHINESS DIRECTIVE

Aircraft Certification Service
Washington, DC

U.S. Department
of Transportation
Federal Aviation
Administration

We post ADs on the internet at "www.faa.gov"

The following Airworthiness Directive issued by the Federal Aviation Administration in accordance with the provisions of Title 14 of the Code of Federal Regulations (14 CFR) part 39, applies to an aircraft model of which our records indicate you may be the registered owner. Airworthiness Directives affect aviation safety and are regulations which require immediate attention. You are cautioned that no person may operate an aircraft to which an Airworthiness Directive applies, except in accordance with the requirements of the Airworthiness Directive (reference 14 CFR part 39, subpart 39.3).

CORRECTION: During formatting, we inadvertently dropped some of the text at the end of the 9th row, "Repetitive intervals" column of Table 2, and the entire 4th row of Table 4. We have corrected this copy.

2005-15-11 BAE Systems (Operations) Limited (Formerly British Aerospace Regional Aircraft): Amendment 39-14200. Docket No. FAA-2005-21137; Directorate Identifier 2002-NM-86-AD.

Effective Date

(a) This AD becomes effective August 30, 2005.

Affected ADs

(b) None.

Applicability

(c) This AD applies to all BAE Systems (Operations) Limited Model Jetstream 4101 airplanes, certificated in any category.

Unsafe Condition

(d) This AD was prompted by a review of primary airframe fatigue test results and a Maintenance Steering Group 3 (MSG-3) analysis. We are issuing this AD to detect and correct fatigue damage of the fuselage, door, engine nacelle, empennage, and wing structures, which could result in reduced structural integrity of the airplane.

Compliance

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

Service Bulletin Reference

(f) The term "the service bulletin," as used in this AD, means BAE Systems (Operations) Limited Service Bulletin J41-51-001, Revision 2, dated April 30, 2003.

Inspection and Corrective Actions

(g) At the compliance times specified in the "Initial Compliance Time" column of Tables 1, 2, 3, 4, and 5 of this AD: Do the applicable detailed inspections and specialized inspections to detect fatigue damage, and replacement of certain bolt assemblies, and any applicable corrective actions, in accordance with the Accomplishment Instructions of the service bulletin. Do any corrective action before further flight. Repeat the inspections and replacement thereafter at intervals specified in the "Repetitive Intervals" column of Tables 1, 2, 3, 4, and 5 of this AD.

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 mirrors, magnifying lenses, etc. may be necessary. Surface cleaning and elaborate procedures may be required."

TABLE 1.—APPENDIX 1 COMPLIANCE TIMES

Part # of actions specified in appendix 1 of the service bulletin	Initial compliance time (whichever occurs later between the times in "inspection threshold" and "grace period")		Repetitive intervals
	Inspection threshold	Grace period	
1, 6	Before the accumulation of 22,500 total flight cycles and after the accumulation of 20,000 total flight cycles.	Within 500 flight cycles after the effective date of this AD.	At intervals not to exceed 3,300 flight cycles.
2	Before the accumulation of 20,000 total flight cycles.	Within 500 flight cycles after the effective date of this AD.	At intervals not to exceed 5,200 flight cycles.
3, 5, 7	Before the accumulation of 21,000 total flight cycles.	Within 500 flight cycles after the effective date of this AD.	At intervals not to exceed 10,000 flight cycles.
4	Before the accumulation of 26,000 total flight cycles and after the accumulation of 20,000 total flight cycles.	Within 500 flight cycles after the effective date of this AD.	At intervals not to exceed 26,000 flight cycles.

TABLE 2.—APPENDIX 2 COMPLIANCE TIMES

Part # of actions specified in appendix 1 of the service bulletin	Initial compliance time (whichever occurs later between the times in "inspection threshold" and "grace period")		Repetitive intervals
	Inspection/replacement threshold	Grace period	
1, 3, 32	Within 96 months after the date of issuance of the original standard Airworthiness Certificate or the date of issuance of the original Export Certificate of Airworthiness, whichever occurs later.	Within 12 months after the effective date of this AD.	At intervals not to exceed 24 months.
2	Before the accumulation of 23,000 total flight cycles.	Within 500 flight cycles after the effective date of this AD.	At intervals not to exceed 10,000 flight cycles.

Part # of actions specified in appendix 1 of the service bulletin	Initial compliance time (whichever occurs later between the times in "inspection threshold" and "grace period")		Repetitive intervals
	Inspection/replacement threshold	Grace period	
4, 10, 11, 12, 13	Before the accumulation of 20,000 total flight cycles.	Within 500 flight cycles after the effective date of this AD..	At intervals not to exceed 6,600 flight cycles.
5	Within 48 months after the date of issuance of the original standard Airworthiness Certificate or the date of issuance of the original Export Certificate of Airworthiness, whichever occurs later.	Within 12 months after the effective date of this AD.	At intervals not to exceed 24 months.
6	Before the accumulation of 20,000 total flight cycles.	Within 500 flight cycles after the effective date of this AD.	At intervals not to exceed 5,400 flight cycles.
7	Before the accumulation of 22,400 total flight cycles and after the accumulation of 20,000 total flight cycles.	Within 500 flight cycles after the effective date of this AD.	At intervals not to exceed 8,200 flight cycles.
8	Before the accumulation of 19,000 total flight cycles.	Within 500 flight cycles after the effective date of this AD.	
9	Before the accumulation of 23,000 total flight cycles.	Within 500 flight cycles after the effective date of this AD.	At intervals not to exceed 2,300 flight cycles.
14	Before the accumulation of 19,700 total flight cycles.	Within 500 flight cycles after the effective date of this AD.	At intervals not to exceed 4,700 flight cycles.
15	Before the accumulation of 25,000 total flight cycles and after the accumulation of 20,000 total flight cycles.	Within 500 flight cycles after the effective date of this AD.	At intervals not to exceed 13,600 flight cycles.
16, 19, 20	Before the accumulation of 26,000 total flight cycles and after the accumulation of 20,000 total flight cycles.	Within 500 flight cycles after the effective date of this AD.	At intervals not to exceed 25,800 flight cycles.
17, 21, 29, 30	Before the accumulation of 26,000 total flight cycles and after the accumulation of 20,000 total flight cycles.	Within 500 flight cycles after the effective date of this AD.	At intervals not to exceed 30,000 flight cycles.
18	Before the accumulation of 26,000 total flight cycles and after the accumulation of 20,000 total flight cycles.	Within 500 flight cycles after the effective date of this AD.	At intervals not to exceed 30,000 flight cycles.
22	Before the accumulation of 26,000 total flight cycles and after the accumulation of 20,000 total flight cycles.	Within 500 flight cycles after the effective date of this AD.	At intervals not to exceed 16,500 flight cycles.
23	Before the accumulation of 22,000 total flight cycles and after the accumulation of 20,000 total flight cycles.	Within 500 flight cycles after the effective date of this AD.	At intervals not to exceed 7,400 flight cycles.
24	Before the accumulation of 23,600 total flight cycles and after the accumulation of 20,000 total flight cycles.	Within 500 flight cycles after the effective date of this AD.	At intervals not to exceed 15,700 flight cycles.

Part # of actions specified in appendix 1 of the service bulletin	Initial compliance time (whichever occurs later between the times in "inspection threshold" and "grace period")		Repetitive intervals
	Inspection/replacement threshold	Grace period	
25	Before the accumulation of 26,000 total flight cycles and after the accumulation of 20,000 total flight cycles.	Within 500 flight cycles after the effective date of this AD.	At intervals not to exceed 12,700 flight cycles.
26	Before the accumulation of 26,000 total flight cycles and after the accumulation of 20,000 total flight cycles.	Within 500 flight cycles after the effective date of this AD.	At intervals not to exceed 21,800 flight cycles.
27	Before the accumulation of 26,000 total flight cycles and after the accumulation of 20,000 total flight cycles.	Within 500 flight cycles after the effective date of this AD.	At intervals not to exceed 18,300 flight cycles.
28	Between 20,000 and 26,000 total flight cycles	Within 500 flight cycles after the effective date of this AD.	At intervals not to exceed 9,500 flight cycles.
31	Before the accumulation of 26,000 total flight cycles and after the accumulation of 20,000 total flight cycles.	Within 500 flight cycles after the effective date of this AD.	At intervals not to exceed 16,300 flight cycles.
33	Before the accumulation of 26,000 total flight cycles.	Within 500 flight cycles after the effective date of this AD.	At intervals not to exceed 26,000 flight cycles.

TABLE 3.—APPENDIX 3 COMPLIANCE TIMES

Part # of actions specified in appendix 3 of the service bulletin	Initial compliance time (whichever occurs later between the times in "inspection threshold" and "grace period")		Repetitive intervals
	Inspection threshold	Grace period	
1, 2	Before the accumulation of 24,000 total flight cycles and after the accumulation of 20,000 total flight cycles.	Within 500 flight cycles after the effective date of this AD.	At intervals not to exceed 11,000 flight cycles.

TABLE 4.—APPENDIX 4 COMPLIANCE TIMES

Part # of actions specified in appendix 4 of the service bulletin	Initial compliance time (whichever occurs later between the times in "inspection threshold" and "grace period")		Repetitive intervals
	Inspection threshold	Grace period	
1	Before the accumulation of 26,000 total flight cycles and after the accumulation of 20,000 total flight cycles.	Within 500 flight cycles after the effective date of this AD.	At intervals not to exceed 12,000 flight cycles.
2	Before the accumulation of 26,000 total flight cycles and after the accumulation of 20,000 total flight cycles.	Within 500 flight cycles after the effective date of this AD.	At intervals not to exceed 30,000 flight cycles.

Part # of actions specified in appendix 4 of the service bulletin	Initial compliance time (whichever occurs later between the times in "inspection threshold" and "grace period")		Repetitive intervals
	Inspection threshold	Grace period	
3, 5	Within 48 months after the date of issuance of the original standard Airworthiness Certificate or the date of the issuance of the original Export Certificate of Airworthiness, whichever occurs later.	Within 12 months after the effective date of this AD.	At intervals not to exceed 48 months.
4, 6	96 months after the date of issuance of the original standard Airworthiness Certificate or the date of issuance of the original Export Certificate of Airworthiness, whichever occurs later.	Within 12 months after the effective date of this AD.	At intervals not to exceed 48 months.

TABLE 5.—APPENDIX 5 COMPLIANCE TIMES

Part # of actions specified in appendix 5 of the service bulletin	Initial compliance time (whichever occurs later between the times in "inspection threshold" and "grace period")		Repetitive intervals
	Inspection threshold	Grace period	
1, 7	Before the accumulation of 26,000 total flight cycles and after the accumulation of 20,000 total flight cycles.	Within 500 flight cycles after the effective date of this AD.	At intervals not to exceed 30,000 flight cycles.
2, 5, 6	Before the accumulation of 26,000 total flight cycles and after the accumulation of 20,000 total flight cycles.	Within 500 flight cycles after the effective date of this AD.	At intervals not to exceed 9,000 flight cycles.
3, 4	Before the accumulation of 26,000 total flight cycles and after the accumulation of 20,000 total flight cycles.	Within 500 flight cycles after the effective date of this AD.	At intervals not to exceed 7,900 flight cycles.

Repairs for Damage Beyond Service Bulletin Limits

(h) If any fatigue damage is found that exceeds the limits specified in the service bulletin: Before further flight, repair the damage according to a method approved by either the Manager, International Branch, ANM-116, FAA, Transport Airplane Directorate; or the Civil Aviation Authority (or its delegated agent).

Previous Actions

(i) Actions done before the effective date of this AD in accordance with BAE Systems (Operations) Limited Service Bulletin J41-51-001, dated February 15, 2002; or Revision 1, dated August 7, 2002; are acceptable for compliance with the requirements of paragraphs (g) and (h) of this AD.

No Report Required

(j) Although the service bulletin referenced in this AD specifies to submit certain information to the manufacturer, this AD does not include that requirement.

Alternative Methods of Compliance (AMOCs)

(k) The Manager, International Branch, ANM-116, Transport Airplane Directorate, FAA, has the authority to approve AMOCs for this AD, if requested in accordance with the procedures found in 14 CFR 39.19.

Related Information

(l) British airworthiness directive 005-02-2002 also addresses the subject of this AD.

Material Incorporated by Reference

(m) You must use BAE Systems (Operations) Limited Service Bulletin J41-51-001, Revision 2, dated April 30, 2003, to perform the actions that are required by this AD, unless the AD specifies otherwise. The Director of the Federal Register approved the incorporation by reference of this document in accordance with 5 U.S.C. 552(a) and 1 CFR part 51. Contact British Aerospace Regional Aircraft American Support, 13850 Mclearen Road, Herndon, Virginia 20171, for a copy of this service information. You may review copies at the Docket Management Facility, U.S. Department of Transportation, 400 Seventh Street SW., Room PL-401, Nassif Building, Washington, DC; on the internet at *http://dms.dot.gov;* or at the National Archives and Records Administration (NARA). For information on the availability of this material at the 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 14, 2005.
Ali Bahrami,
Manager, Transport Airplane Directorate, Aircraft Certification Service.
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