

[Federal Register: August 5, 2009 (Volume 74, Number 149)]  
[Rules and Regulations]  
[Page 38912-38914]  
From the Federal Register Online via GPO Access [wais.access.gpo.gov]  
[DOCID:fr05au09-11]

---

## **DEPARTMENT OF TRANSPORTATION**

### **Federal Aviation Administration**

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

**[Docket No. FAA-2009-0463; Directorate Identifier 2008-NM-065-AD; Amendment 39-15984; AD 2009-16-01]**

**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:** 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:

A failure mode has been identified that can lead to loss of a nose wheel. Any combination of excessive wear and/or adverse tolerances on the axle inner cone, outer cone or wheel hub splined sleeve cones can result in the loss of the critical gap between the inner flange face of the wheel outer cone and the axle end face. If this gap is lost, it can result in the wheel having free play along the length of the axle. This condition, if not corrected, can result in breakage of the wheel nut lock plate leading to unscrewing of the wheel retention nut and subsequent separation of the nose wheel from the landing gear axle.

\* \* \* \* \*

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

**DATES:** This AD becomes effective September 9, 2009.

The Director of the Federal Register approved the incorporation by reference of certain publications listed in this AD as of September 9, 2009.

**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 May 20, 2009 (74 FR 23671). That NPRM proposed to correct an unsafe condition for the specified products. The MCAI states:

A failure mode has been identified that can lead to loss of a nose wheel. Any combination of excessive wear and/or adverse tolerances on the axle inner cone, outer cone or wheel hub splined sleeve cones can result in the loss of the critical gap between the inner flange face of the wheel outer cone and the axle end face. If this gap is lost, it can result in the wheel having free play along the length of the axle. This condition, if not corrected, can result in breakage of the wheel nut lock plate leading to unscrewing of the wheel retention nut and subsequent separation of the nose wheel from the landing gear axle.

For the reasons described above, this AD requires repetitive inspections of the nose landing gear to ensure that the wheels are correctly retained and, depending on findings, replacement of worn parts.

Required actions include inspecting the lock plate for damage (including excessive wear) and cracking, and replacing the lock plate with a new or serviceable part if any damage or cracking is found; inspecting the wheel nut for damage, and replacing any damaged nut with a new or serviceable part; and measuring the gap between the inner flange of the outer cone (at each of the three sections) and the end face of the axle to determine if parts are worn, and replacing worn parts with new or serviceable parts. 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.

### **Conclusion**

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

### **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 7 products of U.S. registry. We also estimate that it will take about 4 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. operators to be \$2,240, or \$320 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 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:



**2009-16-01 BAE Systems (Operations) Limited (Formerly British Aerospace Regional Aircraft):** Amendment 39-15984. Docket No. FAA-2009-0463; Directorate Identifier 2008-NM-065-AD.

**Effective Date**

- (a) This airworthiness directive (AD) becomes effective September 9, 2009.

**Affected ADs**

- (b) None.

**Applicability**

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

**Subject**

- (d) Air Transport Association (ATA) of America Code 32: Landing Gear.

**Reason**

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

A failure mode has been identified that can lead to loss of a nose wheel. Any combination of excessive wear and/or adverse tolerances on the axle inner cone, outer cone or wheel hub splined sleeve cones can result in the loss of the critical gap between the inner flange face of the wheel outer cone and the axle end face. If this gap is lost, it can result in the wheel having free play along the length of the axle. This condition, if not corrected, can result in breakage of the wheel nut lock plate leading to unscrewing of the wheel retention nut and subsequent separation of the nose wheel from the landing gear axle.

For the reasons described above, this AD requires repetitive inspections of the nose landing gear to ensure that the wheels are correctly retained and, depending on findings, replacement of worn parts.

Required actions include inspecting the lock plate for damage (including excessive wear) and cracking, and replacing the lock plate with a new or serviceable part if any damage or cracking is found; inspecting the wheel nut for damage, and replacing any damaged nut with a new or serviceable part; and measuring the gap between the inner flange of the outer cone (at each of the three sections) and the end face of the axle to determine if parts are worn, and replacing worn parts with new or serviceable parts.

## Actions and Compliance

(f) Unless already done, do the following actions for the left and right nose wheel attachments to the axle.

(1) Within 3 months after the effective date of this AD, inspect the lock plate for damage (including excessive wear) and cracking, inspect the wheel nut for damage, and measure the gap between the inner flange of the outer cone and the end face of the axle to determine if parts are worn, in accordance with paragraph 2.B. of BAE Systems (Operations) Limited Service Bulletin J41-32-086, dated June 27, 2007.

(2) If, during any inspection required by paragraph (f)(1) of this AD, any damage or cracking of the lock plate is found, before further flight, replace the lock plate with a new or serviceable part, in accordance with paragraph 2.B. of BAE Systems (Operations) Limited Service Bulletin J41-32-086, dated June 27, 2007.

(3) If, during any inspection required by paragraph (f)(1) of this AD, any damage of the wheel nut is found, before further flight, replace the wheel nut with a new or serviceable part, in accordance with paragraph 2.B. of BAE Systems (Operations) Limited Service Bulletin J41-32-086, dated June 27, 2007.

(4) If, during any measurement required by paragraph (f)(1) of this AD, the measured gap size is found to be less than 0.002 inch (0.05 mm), before further flight, replace any worn parts with new or serviceable parts, in accordance with paragraph 2.B. of BAE Systems (Operations) Limited Service Bulletin J41-32-086, dated June 27, 2007. Within 3,000 flight hours after doing the replacement, repeat the actions for the left and right nose wheel attachments to the axle that are required by paragraph (f)(1) of this AD.

(5) If, during any measurement required by paragraph (f)(1) of this AD, the measured gap size is equal to or more than 0.002 inch (0.05 mm), repeat the actions for the left and right nose wheel attachments to the axle that are required by paragraph (f)(1) of this AD thereafter at intervals not to exceed the value indicated in Table 1 of this AD, depending on the exact finding. If, during any repeat inspection, the finding has changed to another value (see Table 1), adjust the new interval accordingly.

**Table 1 – Repeat Inspection Intervals**

<b>Measured Gap Size</b>	<b>Repeat Inspection Interval in Flight Hours</b>
0.002 inch to 0.005 inch inclusive (0.05/0.13mm)	500
Greater than 0.005 inch to less than or equal to 0.010 inch (0.13/0.25mm)	1,000
Greater than 0.010 inch to less than or equal to 0.020 inch (0.25/0.51mm)	2,000
Greater than 0.020 inch (0.51mm)	3,000

Note 1: Replacement of parts does not constitute terminating action for the inspection requirements of this AD.

## FAA AD Differences

Note 2: This AD differs from the MCAI and/or service information as follows: Although BAE Systems (Operations) Limited Service Bulletin J41-32-086, dated June 27, 2007, does not specify an inspection following the replacement of the left and right nose wheel attachment to the axle for

measurements less than 0.002 inch, paragraph (f)(4) of this AD requires an inspection within 3,000 flight hours after replacing the part.

### **Other FAA AD Provisions**

(g) 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. 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.

(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, the Office of Management and Budget (OMB) has approved the information collection requirements and has assigned OMB Control Number 2120-0056.

### **Related Information**

(h) Refer to MCAI European Aviation Safety Agency Airworthiness Directive 2008-0036, dated February 22, 2008; and BAE Systems (Operations) Limited Service Bulletin J41-32-086, dated June 27, 2007; for related information.

### **Material Incorporated by Reference**

(i) You must use BAE Systems (Operations) Limited Service Bulletin J41-32-086, dated June 27, 2007, 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 July 22, 2009.

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