[Federal Register: April 3, 2003 (Volume 68, Number 64)]
[Rules and Regulations]
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From the Federal Register Online via GPO Access [wais.access.gpo.gov]
[DOCID:fr03ap03-6]

DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

14 CFR Part 39

[Docket No. 2002-CE-56-AD; Amendment 39-13102; AD 2003-07-06]

RIN 2120-AA64

Airworthiness Directives; British Aerospace Model HP.137 Jetstream Mk.1, Jetstream Series 200, Jetstream Series 3101, and Jetstream Model 3201 Airplanes

AGENCY: Federal Aviation Administration, DOT.

ACTION: Final rule.

SUMMARY: This amendment adopts a new airworthiness directive (AD) that applies to all British Aerospace Model HP.137 Jetstream Mk.1, Jetstream Series 200, Jetstream Series 3101, and Jetstream Model 3201 airplanes. This AD requires you to inspect the steering jack piston rod for cracks and replace if necessary; measure the torque setting of the steering jack piston rod end fitting and stop bolt; and measure the thickness of the tab washers. This AD also requires you to calculate a new safe life limit for the steering jack piston rod based on the results of the inspection and the measurements. This AD is the result of mandatory continuing airworthiness information (MCAI) issued by the airworthiness authority for the United Kingdom. The actions specified by this AD are intended to detect, correct, and prevent cracks in the steering jack piston rod, which could result in failure of the steering jack piston rod. Such failure could lead to loss of steering control of the airplane during takeoff, landing, and taxi operations.

DATES: This AD becomes effective on May 22, 2003.

The Director of the Federal Register approved the incorporation by reference of certain publications listed in the regulations as of May 22, 2003.

ADDRESSES: You may get the service information referenced in this AD from British Aerospace Regional Aircraft, Prestwick International Airport, Ayrshire, KA9 2RW, Scotland; telephone: (01292) 672345; facsimile: (01292) 671625. You may view this information at the Federal Aviation Administration (FAA), Central Region, Office of the Regional Counsel, Attention: Rules Docket No. 2002-CE-56-AD, 901 Locust, Room 506, Kansas City, Missouri 64106; or at the Office of the Federal Register, 800 North Capitol Street, NW., suite 700, Washington, DC.

FOR FURTHER INFORMATION CONTACT: Doug Rudolph, Aerospace Engineer, FAA, Small Airplane Directorate, 901 Locust, Room 301, Kansas City, Missouri 64106; telephone: (816) 329-4059; facsimile: (816) 329-4090.

SUPPLEMENTARY INFORMATION:

Discussion

What Events Have Caused This AD?

The Civil Aviation Authority (CAA), which is the airworthiness authority for the United Kingdom, recently notified FAA that an unsafe condition may exist on all British Aerospace Model HP.137 Jetstream Mk.1, Jetstream Series 200, Jetstream Series 3101, and Jetstream Model 3201 airplanes. The CAA reports that the steering jack piston rod failed on one of the affected airplanes while in service. The CAA determined that the failure of the piston rod was caused by fatigue cracking on the piston rod end fitting. Fatigue cracking was caused by applying excessive torque to the steering jack piston rod end fitting during assembly.

The safe life limit for the steering jack piston rod is currently 45,000 ground-air-ground (GAG) cycles. Failure of the above-mentioned steering jack piston rod occurred at 2,132 GAG cycles. Because of the possibility that excessive torque had been applied to the steering jack piston rod during assembly, the safe life limit for this part has been reduced.

What Is the Potential Impact if FAA Took No Action?

This condition, if not detected and corrected, could result in failure of the steering jack piston rod. Such failure could lead to loss of steering control of the airplane during takeoff, landing, and taxi operations.

Has FAA Taken Any Action to This Point?

We issued a proposal to amend part 39 of the Federal Aviation Regulations (14 CFR part 39) to include an AD that would apply to all British Aerospace Model HP.137 Jetstream Mk.1, Jetstream Series 200, Jetstream Series 3101, and Jetstream Model 3201 airplanes. This proposal was published in the Federal Register as a notice of proposed rulemaking (NPRM) on January 27, 2003 (68 FR 3832). The NPRM proposed to require you to inspect the steering jack piston rod for cracks and replace if necessary; measure the torque setting of the steering jack piston rod end fitting and stop bolt; and measure the thickness of the tab washers. The NPRM also proposed to require you to calculate a new safe life limit for the steering jack piston rod based on the results of the proposed inspection and the proposed measurements.

Was the Public Invited to Comment?

The FAA encouraged interested persons to participate in the making of this amendment. We did not receive any comments on the proposed rule or on our determination of the cost to the public.

FAA's Determination

What Is FAA's Final Determination on This Issue?

After careful review of all available information related to the subject presented above, we have determined that air safety and the public interest require the adoption of the rule as proposed except for minor editorial corrections. We have determined that these minor corrections:

–Provide 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.

How Does the Revision to 14 CFR Part 39 Affect This AD?

On July 10, 2002, FAA published a new version of 14 CFR part 39 (67 FR 47997, July 22, 2002), which governs FAA's AD system. This regulation now includes material that relates to special flight permits, alternative methods of compliance, and altered products. This material previously was included in each individual AD. Since this material is included in 14 CFR part 39, we will not include it in future AD actions.

Cost Impact

How Many Airplanes Does This AD Impact?

We estimate that this AD affects 250 airplanes in the U.S. registry.

What Is the Cost Impact of this AD on Owners/Operators of the Affected Airplanes?

We estimate the following costs to accomplish the inspection:

Labor cost	Parts cost	Total cost per airplane	Total cost on U.S. operators
1 workhour x $60 = $60	No parts required	$60	$60 x 250 = $15,000

We estimate the following costs to accomplish any necessary replacements of the steering jack piston rod that would be required based on the results of the inspection and/or measurements. We have no way of determining the number of airplanes that may need such replacement:

Labor cost	Parts cost	Total cost per airplane
8 workhours x $60 = $240	$5,300	$240 + $5,300 = $5,540

Compliance Time of This AD

What Will Be the Compliance Time of This AD?

The compliance time of this AD is "within the next 90 days or 200 ground-air-ground (GAG) cycles after the effective date of this AD, whichever occurs first."

Why Is the Compliance Time Presented in Calendar Time and Operational Time?

Failure of the steering jack piston rod is only unsafe during airplane operation; this condition is not a result of the number of times the airplane is operated. The cause of the unsafe condition is the result of incorrect torque settings used on the steering jack piston rod end fitting during assembly. We have no way of determining when the unsafe condition occurred on the affected airplanes. For this reason, the FAA has determined that a compliance time based on calendar time and operational time should be utilized in this AD in order to assure that the unsafe condition is not allowed to go uncorrected over time.

Regulatory Impact

Does This AD Impact Various Entities?

The regulations adopted herein 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. Therefore, it is determined that this final rule does not have federalism implications under Executive Order 13132.

Does This AD Involve a Significant Rule or Regulatory Action?

For the reasons discussed above, I certify that this action (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. A copy of the final evaluation prepared for this action is contained in the Rules Docket. A copy of it may be obtained by contacting the Rules Docket at the location provided under the caption ADDRESSES.

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 Federal Aviation Administration amends part 39 of the Federal Aviation Regulations (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. FAA amends § 39.13 by adding a new AD to read as follows:

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).

2003-07-06 British Aerospace: Amendment 39-13102; Docket No. 2002-CE-56-AD.

(a) *What airplanes are affected by this AD?* This AD affects Model HP.137 Jetstream Mk.1, Jetstream Series 200, Jetstream Series 3101, and Jetstream Model 3201 airplanes, all serial numbers, that are certificated in any category.

(b) *Who must comply with this AD?* Anyone who wishes to operate any of the airplanes identified in paragraph (a) of this AD must comply with this AD.

(c) *What problem does this AD address?* The actions specified by this AD are intended to detect, correct, and prevent cracks in the steering jack piston rod, which could result in failure of the steering jack piston rod. Such failure could lead to loss of steering control of the airplane during takeoff, landing, and taxi operations.

(d) *What actions must I accomplish to address this problem?* To address this problem, you must accomplish the following:

Actions	Compliance	Procedures
(1) Inspect the steering jack piston rod for cracks. (i) If cracks are found, replace the cracked steering jack piston rod. Install the new steering jack piston rod using a torque setting of 175 lbf (pound force) inch or 20 Nm (Newton meters) when tightening the end fitting and stop bolt. (ii) If no cracks are found, determine the torque setting of the steering jack piston rod end fitting and stop bold.	Inspect within the next 90 days or 200 ground-air-ground (GAG) cycles after May 22, 2003 (the effective date of this AD), whichever occurs first. Replace cracked steering jack piston rods or determine torque settings prior to further flight.	In accordance with the procedures in APPH Ltd. Service Bulletin 32–76 (pages 1, 2, and 4 through 7, dated October 2002; and page 3, Erratum 1, dated November 2002), as referenced in British Aerospace Jetstream Mandatory Service Bulletin 32–JA020741, Original Issue: November 2, 2002.

(2) If the torque setting of the steering jack piston rod end fitting or stop bolt is greater than 175 lbf inch or 20 Nm and is equal to or less than 435 lbf inch or 49 Nm: (i) calculate the new safe life limit for the steering jack piston rod; and (ii) incorporate the following into the Aircraft Logbook: ‘‘In accordance with AD 2003–07– 06, the steering jack piston rod is life limited to ____.’’	Prior to further flight after the inspection required in paragraph (d)(1) of this AD.	In accordance with the procedures in APPH Ltd. Service Bulletin 32–76, (pages 1, 2, and 4 through 7, dated October 2002; and page 3, Erratum 1, dated November 2002), as referenced in British Aerospace Jetstream Mandatory Service Bulletin 32– JA020741, Original Issue: November 2, 2002.
(3) If the torque setting of the steering jack piston rod end fitting or stop bolt is greater than 435 lbf inch or 49 Nm, measure the deformation thickness of the tab washers. (i) If the tab washer deformation thickness is greater than 0.001 inch and is equal to or less than 0.005 inch, calculate a new safe life limit for the steering jack piston rod, and incorporate the following into the Aircraft Logbook: ‘‘In accordance with AD 2003–07–06, the steering jack piston rod is life limited to ____.’’ (ii) If the tab washer deformation thickness is greater than 0.005 inch, replace the steering jack piston rod using the torque settings specified in paragraph (d)(1) of this AD.	Prior to further flight after the inspection required in paragraph (d)(1) of this AD.	In accordance with the procedures in APPH Ltd. Service Bulletin 32–76, (pages 1, 2, and 4 through 7, dated October 2002; and page 3, Erratum 1, dated November 2002), as referenced in British Aerospace Jetstream Mandatory Service Bulletin 32– JA020741, Original Issue: November 2, 2002.
(4) Do not install any steering jack piston rod unless it has been inspected, determined to be free of cracks, and the safe life limit has been established.	As of May 22, 2003 (the effective date of this AD).	In accordance with the procedures in APPH Ltd. Service Bulletin 32–76, (pages 1, 2, and 4 through 7, dated October 2002; and page 3, Erratum 1, dated November 2002), as referenced in British Aerospace Jetstream Mandatory Service Bulletin 32– JA020741, Original Issue: November 2, 2002.

Note 1: If the owners/operators of the affected airplanes have not kept track of ground-air-ground (GAG) cycles, hours time-in-service (TIS) may be substituted by calculating 1.5 GAG cycles per hour TIS. For example, 3,000 GAG cycles would equal 2,000 hours TIS.

(e) *Can I comply with this AD in any other way?* To use an alternative method of compliance or adjust the compliance time, use the procedures in 14 CFR 39.19. Send these requests to the Standards Office Manager, Small Airplane Directorate. For information on any already approved alternative methods of compliance, contact Doug Rudolph, Aerospace Engineer, FAA, Small Airplane Directorate, 901 Locust, Room 301, Kansas City, Missouri 64106; telephone: (816) 329-4059; facsimile: (816) 329-4090.

(f) *Are any service bulletins incorporated into this AD by reference?* Actions required by this AD must be done in accordance with APPH Ltd. Service Bulletin 32-76 (pages 1, 2, and 4 through 7, dated October 2002; and page 3, Erratum 1, dated November 2002), as referenced in British Aerospace Jetstream Mandatory Service Bulletin 32-JA020741, Original Issue: November 2, 2002. The Director of the Federal Register approved this incorporation by reference under 5 U.S.C. 552(a) and 1 CFR part 51. You may get copies from British Aerospace Regional Aircraft, Prestwick International Airport, Ayrshire, KA9 2RW, Scotland; telephone: (01292) 672345; facsimile: (01292) 671625. You may view copies at the FAA, Central Region, Office of the Regional Counsel, 901 Locust, Room 506, Kansas City, Missouri, or at the Office of the Federal Register, 800 North Capitol Street, NW., suite 700, Washington, DC.

Note 2: The subject of this AD is addressed in British Aerospace Jetstream Mandatory Service Bulletin 32-JA020741, Original Issue: November 2, 2002. This service bulletin is classified as mandatory by the United Kingdom Civil Aviation Authority (CAA).

(g) *When does this amendment become effective?* This amendment becomes effective on May 22, 2003.

Issued in Kansas City, Missouri, on March 25, 2003.
Michael Gallagher,
Manager, Small Airplane Directorate, Aircraft Certification Service.
[FR Doc. 03-7746 Filed 4-2-03; 8:45 am]
BILLING CODE 4910-13-P