



[4910-13-P]

**DEPARTMENT OF TRANSPORTATION**

**Federal Aviation Administration**

**14 CFR Part 39**

**[Docket No. FAA-2014-0020; Directorate Identifier 2013-CE-039-AD]**

**RIN 2120-AA64**

**Airworthiness Directives; British Aerospace (Operations) Limited Airplanes**

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

**ACTION:** Notice of proposed rulemaking (NPRM).

**SUMMARY:** We propose to adopt a new airworthiness directive (AD) for British Aerospace (Operations) Limited Model HP.137 Jetstream Mk.1, Jetstream Series 200, and Jetstream Series 3101 airplanes that would supersede an existing AD. This proposed 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 cracking of the forward main landing gear yoke pintle resulting from corrosion pits leading to stress corrosion. We are issuing this proposed AD to require actions to address the unsafe condition on these products.

**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 20590, between 9 a.m. and 5 p.m., Monday through Friday, except Federal holidays.

For service information identified in this proposed AD, contact BAE Systems (Operations) Ltd, Customer Information Department, Prestwick International Airport, Ayrshire, KA9 2RW, Scotland, United Kingdom; phone: +44 1292 675207, fax: +44 1292 675704; email: RApublications@baesystems.com; Internet: <http://www.jetstreamcentral.com>. You may review copies of the referenced service information at the FAA, Small Airplane Directorate, 901 Locust, Kansas City, Missouri 64106. For information on the availability of this material at the FAA, call (816) 329-4148.

### **Examining the AD Docket**

You may examine the AD docket on the Internet at <http://www.regulations.gov> by searching for and locating Docket No. FAA-2014-0020; or in person at the Docket Management Facility 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 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:** Taylor Martin, Aerospace Engineer, FAA, Small Airplane Directorate, 901 Locust, Room 301, Kansas City, Missouri 64106; telephone: (816) 329-4138; fax: (816) 329-4090; email: [taylor.martin@faa.gov](mailto:taylor.martin@faa.gov).

## **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-2014-0020; Directorate Identifier 2013-CE-039-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 because of those comments.

We will post all comments we receive, without change, to <http://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 December 16, 1986, we issued AD 87-02-04, Amendment 39-5497 (51 FR 47211, December 31, 1986). That AD required actions intended to address an unsafe condition on the products listed above.

Since we issued AD 87-02-04, Amendment 39-5497 (51 FR 47211, December 31, 1986), there has been a reported failure of the main landing gear (MLG) on a Jetstream Series 3100 airplane. An investigation revealed stress corrosion cracking of the MLG yoke pintle housing as a root cause of the MLG failure.

The European Aviation Safety Agency (EASA), which is the Technical Agent for the Member States of the European Community, has issued EASA AD No.: 2013-0208, dated September 10, 2013 (referred to after this as “the MCAI”), to correct an unsafe condition for the specified products. The MCAI states:

Prompted by occurrences of the main landing gear (MLG) yoke pintle housing cracking, the United Kingdom Civil Aviation Authority (UK CAA) issued AD G-003-01-86 to require repetitive inspections to identify any crack in the yoke pintle housing on MLG fitted to Jetstream 3100

aeroplanes in accordance with BAE Systems (Operations) Ltd Service Bulletin (SB) 32-A-JA851226, and depending on findings, corrective action. After that AD was issued, an occurrence of Jetstream 3100 MLG failure was reported after landing. The subsequent investigation revealed stress corrosion cracking of the MLG yoke pintle housing as a root cause of the MLG failure. Furthermore, the investigation report recommended a review of the effectiveness of UK CAA AD G-003-01-86 in identifying cracks in the yoke pintle housing on MLG fitted to Jetstream 3100 aeroplanes.

Degradation of the surface protection by abrasion can occur when the forward face of the yoke pintle rotates against the pintle bearing, which introduces corrosion pits and, consequently, stress corrosion cracking.

This condition, if not detected and corrected, could lead to structural failure of the MLG, possibly resulting in loss of control of the aeroplane during take-off or landing runs.

To provide protection of the affected area of the MLG assembly spigot housing, BAE Systems (Operations) Ltd issued SB 32-JM7862 to provide instructions for installation of a protective washer, fitted at the forward spigot on both, left hand (LH) and right hand (RH), MLG. Consequently, BAE Systems (Operations) Ltd issued SB 32-A-JA851226 at Revision 5 to provide additional accomplishment instructions for Non-destructive testing inspection (NDT) of MLG equipped with the protective washer installed in accordance with BAE Systems (Operations) Ltd SB 32-JM7862 and to introduce reference to MLG manufacturer APPH Ltd SB 32-19 at Revision 4, providing instructions for re-protection of the yoke pintle.

For the reasons described above, this AD retains the requirements of AD G-003-01-86, which is superseded, and requires implementation of revised inspection requirements, and depending on findings, corrective action. This AD introduces an optional modification, which constitutes terminating action for the inspections required by this AD.

You may examine the MCAI on the Internet at <http://www.regulations.gov> by searching for and locating it in Docket No. FAA-2014-0020.

#### **Relevant Service Information**

British Aerospace (Operations) Limited issued Jetstream Series 3100 & 3200 Service Bulletin No. 32-A-JA851226, Revision 5, dated April 30, 2013; Jetstream Service Bulletin 32-JA880340, dated January 6, 1989; which references British

Aerospace Dynamics Division Service Bulletin 32-36, dated July 20, 1988; APPH Ltd. Service Bulletin No. 32-19, Revision 4, dated April 3, 2013; and APPH Ltd. Service Bulletin No. 32-40, Revision 1, dated February 2003. The actions described in this service information are intended to correct the unsafe condition identified in the MCAI.

### **FAA’s Determination and Requirements of the 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 this State of Design Authority, they have notified us of the unsafe condition described in the MCAI and service information referenced above. We are proposing this AD because we evaluated all information and determined the unsafe condition exists and is likely to exist or develop on other products of the same type design.

### **Costs of Compliance**

We estimate that this proposed AD will affect 44 products of U.S. registry. We also estimate that it would take about 14 work-hours per product to comply with the inspection requirements of this proposed AD. The average labor rate is \$85 per work-hour.

Based on these figures, we estimate the cost of this proposed AD on U.S. operators to be \$52,360, or \$1,190 per product.

In addition, we estimate that any necessary follow-on actions would take about 10 work-hours and require parts costing \$5,000, for a cost of \$5,850 per product for repairs. We have no way of determining the number of products that may need these actions.

### **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.

### **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 Amendment 39-5497 (51 FR 47211, December 31, 1986), and adding the following new AD:

**British Aerospace (Operations) Limited:** Docket No. FAA-2014-0020; Directorate Identifier 2013-CE-039-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 87-02-04, Amendment 39-5497 (51 FR 47211, December 31, 1986).

**(c) Applicability**

This AD applies to British Aerospace (Operations) Limited Model HP.137 Jetstream Mk.1, Jetstream Series 200, and Jetstream Series 3101 airplanes, all serial numbers, certificated in any category.

**(d) Subject**

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

**(e) Reason**

This AD was prompted by 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 cracking of the forward main landing gear (MLG) yoke pintle that resulted from corrosion pits leading to stress corrosion. We are issuing this AD to prevent failure of the MLG, which could result in loss of control of the airplane during take-off or landing.

**(f) Actions and Compliance**

Unless already done, do the following actions specified in paragraphs (f)(1) through (f)(11) of this AD:

(1) For airplanes previously affected by AD 87-02-04, Amendment 39-5497 (51 FR 47211, December 31, 1986): At the next 1,200 MLG flight cycle repetitive inspection required by AD 87-02-04 or within the next 12 months after the last 1,200 MLG flight cycle repetitive inspection required by AD 87-02-04, whichever occurs first, and repetitively thereafter at intervals not to exceed 1,200 MLG flight cycles or 12 months, whichever occurs first, do a nondestructive testing (NDT) inspection of each MLG assembly cylinder attachment spigot housing following the Accomplishment Instructions in APPH Ltd. Service Bulletin No. 32-19, Revision 4, dated April 3, 2013, as referenced in British Aerospace Jetstream Series 3100 & 3200 Service Bulletin 32-A-JA851226, Revision 5, dated April 30, 2013.

(2) For airplanes not previously affected by AD 87-02-04, Amendment 39-5497 (51 FR 47211, December 31, 1986): Within the next 300 MLG flight cycles after the effective date of this AD or within the next 3 months after the effective date of this AD or at the next overhaul of the MLG after the effective date of this AD, whichever occurs first, and repetitively thereafter at intervals not to exceed 1,200 MLG flight cycles or 12 months, whichever occurs first, do a NDT inspection of each MLG assembly cylinder attachment spigot housing following the Accomplishment Instructions in APPH Ltd. Service Bulletin No. 32-19, Revision 4, dated April 3, 2013, as referenced in British Aerospace Jetstream Series 3100 & 3200 Service Bulletin 32-A-JA851226, Revision 5, dated April 30, 2013.

(3) For all airplanes: Within 300 landings after a heavy or abnormal landing, conduct a NDT inspection of each MLG assembly cylinder attachment spigot following Accomplishment Instructions in APPH Ltd. Service Bulletin No. 32-19, Revision 4,

dated April 3, 2013, as referenced in British Aerospace Jetstream Series 3100 & 3200 Service Bulletin 32-A-JA851226, Revision 5, dated April 30, 2013.

(4) For all airplanes: If any crack is found during any inspection required in paragraphs (f)(1), (f)(2), or (f)(3) of this AD, before further flight, take all necessary corrective actions following the Accomplishment Instructions in APPH Ltd. Service Bulletin No. 32-19, Revision 4, dated April 3, 2013, as referenced in British Aerospace Jetstream Series 3100 & 3200 Service Bulletin 32-A-JA851226, Revision 5, dated April 30, 2013.

(5) For all airplanes: Within 300 MLG flight cycles or 3 months, whichever occurs first after each NDT inspection required in paragraph (f)(1) or (f)(2) of this AD, as applicable, and repetitively thereafter at intervals not to exceed 300 MLG flight cycles or 3 months, whichever occurs first, do a visual inspection of each MLG following the Accomplishment Instructions in APPH Ltd. Service Bulletin No. 32-19, Revision 4, dated April 3, 2013, as referenced in British Aerospace Jetstream Series 3100 & 3200 Service Bulletin 32-A-JA851226, Revision 5, dated April 30, 2013.

(6) For all airplanes: If any discrepancy is found during any visual inspection required in paragraph (f)(5) of this AD, before further flight, take all necessary corrective actions following the Accomplishment Instructions in APPH Ltd. Service Bulletin No. 32-19, Revision 4, dated April 3, 2013, as referenced in British Aerospace Jetstream Series 3100 & 3200 Service Bulletin 32-A-JA851226, Revision 5, dated April 30, 2013.

(7) For all airplanes with a MLG incorporating a microswitch hole: Within the next 10,600 MLG flight cycles since new and repetitively thereafter at intervals not to exceed 1,200 MLG flight cycles, do a NDT inspection of each MLG microswitch hole following the Accomplishment Instructions in APPH Ltd. Service Bulletin No. 32-40, Revision 1, dated February 2003 as referenced in Part C, paragraph (2)(b) of British

Aerospace Jetstream Series 3100 & 3200 Service Bulletin 32-A-JA851226, Revision 5, dated April 30, 2013.

(8) For all airplanes: If any crack is found during any NDT inspection required in paragraph (f)(7) of this AD, before further flight, take all necessary corrective actions following the Accomplishment Instructions in APPH Ltd. Service Bulletin No. 32-40, Revision 1, dated February 2003, as referenced in British Aerospace Jetstream Series 3100 & 3200 Service Bulletin 32-A-JA851226, Revision 5, dated April 30, 2013.

(9) For all airplanes: Doing all necessary corrective actions required in paragraphs (f)(4), (f)(6), and (f)(8) of this AD does not constitute terminating action for the inspections required by this AD.

(10) For all airplanes: Modification of each MLG cylinder following BAE Systems (Operations) Ltd. Service Bulletin 32-JA880340, original issue, dated January 6, 1989, constitutes terminating action for the inspections required by this AD for that MLG.

(11) For all airplanes: The compliance times in paragraphs (f)(2), (f)(3), (f)(5), and (f)(7) of this AD are presented in flight cycles (landings). If the total flight cycles have not been kept, multiply the total number of airplane hours time-in-service (TIS) by 0.75 to calculate the cycles. For the purposes of this AD:

(i) 100 hours TIS X .75 = 75 cycles; and

(ii) 1,000 hours TIS X .75 = 750 cycles.

**(g) Credit for Actions Done in Accordance with Previous Service Information**

This AD allows credit for the initial inspection required in paragraph (f)(7) of this AD if done before the effective date of this AD following APPH Ltd. Service Bulletin 32-40, at Initial Issue dated June 21, 1989.

**(h) Other FAA AD Provisions**

The following provisions also apply to this AD:

(1) **Alternative Methods of Compliance (AMOCs):** The Manager, Standards Office, 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: Taylor Martin, Aerospace Engineer, FAA, Small Airplane Directorate, 901 Locust, Room 301, Kansas City, Missouri 64106; telephone: (816) 329-4138; fax: (816) 329-4090; email: taylor.martin@faa.gov. Before using any approved AMOC on any airplane to which the AMOC applies, notify your appropriate principal inspector (PI) in the FAA Flight Standards District Office (FSDO), or lacking a PI, your local FSDO.

(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, a federal agency may not conduct or sponsor, and a person is not required to respond to, nor shall a person be subject to a penalty for failure to comply with a collection of information subject to the requirements of the Paperwork Reduction Act unless that collection of information displays a current valid OMB Control Number. The OMB Control Number for this information collection is 2120-0056. Public reporting for this collection of information is estimated to be approximately 5 minutes per response, including the time for reviewing instructions, completing and reviewing the collection of information. All responses to this collection of information are mandatory. Comments concerning the accuracy of this burden and suggestions for reducing the burden should be directed to the FAA at: 800 Independence Ave. SW, Washington, DC 20591, Attn: Information Collection Clearance Officer, AES-200.

**(i) Related Information**

Refer to MCAI European Aviation Safety Agency (EASA) AD No.: 2013-0208, dated September 10, 2013, for related information. You may examine the MCAI on the Internet at <http://www.regulations.gov> by searching for and locating it in Docket No. FAA-2014-0020. For service information related to this AD, contact BAE Systems (Operations) Ltd, Customer Information Department, Prestwick International Airport, Ayrshire, KA9 2RW, Scotland, United Kingdom; phone: +44 1292 675207, fax: +44 1292 675704; email: [RAPublications@baesystems.com](mailto:RAPublications@baesystems.com); Internet: <http://www.jetstreamcentral.com>. You may review copies of the referenced service information at the FAA, Small Airplane Directorate, 901 Locust, Kansas City, Missouri 64106. For information on the availability of this material at the FAA, call (816) 329-4148.

Issued in Kansas City, Missouri, on January 8, 2014.

Earl Lawrence,  
Manager, Small Airplane Directorate,  
Aircraft Certification Service.