



**United Kingdom
Civil Aviation Authority**

**AIRWORTHINESS
DIRECTIVE**

AD No: G-2004-0003

Issue Date: 24 February 2004

This AD is issued by the UK CAA acting for and on behalf of the European Aviation Safety Agency as the Primary Aviation Authority (ICAO Annex 8 Authority of State of Design) for the affected product(s).

Approved by the European Aviation Safety Agency under approval number 2004-1538 on 24 February 2004.

In accordance with Article 9(7)(b) of the Air Navigation Order 2000 as amended the following action required by this Airworthiness Directive (AD) is mandatory for applicable aircraft registered in the United Kingdom.

No person may operate an aircraft to which an AD applies except in accordance with the requirements of that AD unless otherwise agreed with the Authority of the State of Registry.

Type Approval Holders Name:

BAE SYSTEMS (OPERATIONS) LTD

Type/Model Designation(s):

JETSTREAM 4100

Type Certificate Data Sheet No: BA27

Superseded/ Revised ADs: None

**ATA 32 - NOSE LANDING GEAR - INSPECTION -
CHECK FOR FREE MOVEMENT OF THE CAPSULE**

Manufacturer(s): BAE Systems/Jetstream Aircraft Ltd

Applicability: Model Jetstream 4100 all Series aeroplanes certificated in any category.

Reason: There have been two recent incidents reported by US operators of Jetstream 4100 aeroplanes conducting emergency landings with the nose landing gear not fully extended. Initial investigations suggest that there may be a problem of binding between the upper and lower sliding/support bearings and the NLG capsule that is part of the shortening mechanism. Since these incidents two further reports were received from US operators relating to migration of the lower bearing through which the NLG capsule slides as the landing gear shortens, which is indicative of excessive friction between the bearing and capsule. High friction at the lower bearing may sometimes result in failure of the mechanisms that secure the bearing in position. This type of failure still allows the gear to fully extend and lock down. Whenever high friction is present at the upper bearing and/or the lower bearing that prevents free movement of the capsule, the NLG may ultimately fail to extend.

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Compliance/Action:

- a) Within 300 cycles or 30 days of the effective date of this Airworthiness Directive, carry out the inspection of the nose landing gear capsule/bearing assemblies in accordance with paragraph 2 of BAE Systems (Operations) Service Bulletin J41-A32-082, Revision 1 and APPH Service Bulletin AIR83586-32-22 Revision 1, paragraph 2.A. (Part 1).
- b) If the inspection in accordance with paragraph (a) of this Airworthiness Directive is satisfactory, carry out the inspection of the nose landing gear capsule/bearing assemblies in accordance with paragraph 2 of BAE Systems (Operations) Service Bulletin J41-A32-082, Revision 1 and APPH Service Bulletin AIR83586-32-22 Revision 1, paragraph 2.B. (Part 2), and then APPH Service Bulletin AIR83586-32-22 Revision 1, paragraph 2.A. (Part 1) within 3000 flight hours.

Repeat the inspection of the nose landing gear capsule/bearing assemblies in accordance with paragraph 2 of BAE Systems (Operations) Service Bulletin J41-A32-082, Revision 1 and APPH Service Bulletin AIR83586-32-22 Revision 1, paragraph 2.B. (Part 2), and then APPH Service Bulletin AIR83586-32-22 Revision 1, paragraph 2.A. (Part 1), at an interval not exceeding 3,000 flight hours.

- c) If the inspection in accordance with paragraph (a) of this Airworthiness Directive is not satisfactory, carry out the inspection of the nose landing gear capsule/bearing assemblies in accordance with paragraph 2 of BAE Systems (Operations) Service Bulletin J41-A32-082, Revision 1 and APPH Service Bulletin AIR83586-32-22 Revision 1, paragraph 2.B. (Part 2), and then APPH Service Bulletin AIR83586-32-22 Revision 1, paragraph 2.A. (Part 1) prior to further flight.
- d) If the inspection in accordance with paragraph (c) of this Airworthiness Directive is satisfactory carry out the inspection of the nose landing gear capsule/bearing assemblies in accordance with paragraph 2 of BAE Systems (Operations) Service Bulletin J41-A32-082, Revision 1 and APPH Service Bulletin AIR83586-32-22 Revision 1, paragraph 2.A. (Part 1) within 600 flight hours.
- e) If the inspection in accordance with paragraph (c) of this Airworthiness Directive is not satisfactory, remove the NLG and install a replacement NLG.
- f) Upon installation of a replacement NLG carry out the inspection of the nose landing gear capsule/bearing assemblies in accordance with paragraph 2 of BAE Systems (Operations) Service Bulletin J41-A32-082, Revision 1 and APPH Service Bulletin AIR83586-32-22 Revision 1, paragraph 2.A. (Part 1).

Complete the inspection of the replacement NLG in accordance with paragraph (b) through (e) of this Airworthiness Directive, as applicable.

Reference Publications: BAE Systems (Operations) Ltd Service Bulletin J41-A32-082, Revision 1 and APPH Ltd Service Bulletin AIR83586-32-33, Revision 1, may be obtained from Project Management Group, Customer Information Department, BAE Systems (Operations) Ltd, Prestwick International Airport, Ayrshire, KA9 2RW, Scotland. Telephone: +44 (0) 1292 675207 Facsimile: +44 (0) 1292 675704 E-mail: Rapublications@baesystems.com

Remarks: Enquiries regarding this Airworthiness Directive should be referred to Mr M P Gadd, Civil Aviation Authority, Programmes Department, Safety Regulation Group, Aviation House, Gatwick Airport South, West Sussex, RH6 0YR, United Kingdom. Telephone: +44 (0) 1293 573313 Facsimile: +44 (0) 1293 573976 E-mail: michael.gadd@srg.caa.co.uk

Note: This Airworthiness Directive was issued as an Emergency AD on 24 February 2004.