EASA	EMERGENCY AIRWORTHINESS DIRECTIVE
	AD No.: 2009-0197-E **Date: 03 September 2009** Note: This Emergency Airworthiness Directive (AD) is issued by EASA, acting in accordance with Regulation (EC) No 216/2008 on behalf of the European Community, its Member States and of the European third countries that participate in the activities of EASA under Article 66 of that Regulation.

This AD is issued in accordance with EC 1702/2003, Part 21A.3B. In accordance with EC 2042/2003 Annex I, Part M.A.301, the continuing airworthiness of an aircraft shall be ensured by accomplishing any applicable ADs. Consequently, no person may operate an aircraft to which an AD applies, except in accordance with the requirements of that AD, unless otherwise specified by the Agency [EC 2042/2003 Annex I, Part M.A.303] or agreed with the Authority of the State of Registry [EC 216/2008, Article 14(4) exemption].

Type Approval Holder's Name :	**Type/Model designation(s) :**
BAE Systems (Operations) Ltd	BAe 146 and AVRO 146-RJ aeroplanes

TCDS Number :	EASA.A.182
Foreign AD :	Not applicable
Supersedure :	This AD supersedes United Kingdom (UK) CAA AD 002-06-2000 dated June 2000 and EASA Emergency AD 2009-0043-E dated 27 February 2009.

ATA 32	**Landing Gear – Nose Landing Gear – Inspection / Replacement**
Manufacturer(s):	BAE Systems (Operations) Ltd, British Aerospace plc, British Aerospace (Commercial Aircraft) Ltd, British Aerospace (Operations) Ltd, British Aerospace Regional Aircraft Ltd, British Aerospace Regional Aircraft trading as Avro International Aerospace.
Applicability:	BAe 146 and AVRO 146-RJ aircraft, all models, all serial numbers (s/n), if a Nose Landing Gear (NLG) unit with Part Number (P/N) 200876001, P/N 200876002, P/N 200876003, P/N 200876004 or P/N 201138002 is installed, on which Messier-Dowty SB 146-32-150 has not been embodied, or if a Messier-Dowty NLG unit with one of these P/Ns is installed, which has had Messier-Dowty SB 146-32-150 declared as being embodied by Messier Services, Sterling, Virginia, United States of America. **Note:** Aeroplanes with a NLG unit P/N 201138002 installed having s/n M-DG-0169 or higher are not affected by this AD.
Reason:	In June 2000, prompted by a crack found at the top of the NLG oleo, BAE Systems (Operations) Ltd issued Inspection Service Bulletin (SB) 32-158. This SB was classified mandatory by the UK Civil Aviation Authority under AD number 002-06-2000, requiring repetitive non-destructive testing (NDT) inspections for cracking on the upper end of the NLG oleo. The AD also provided an optional terminating action for the repetitive inspections, by embodiment of Messier-Dowty SB.146-32-150. As part of a recent accident investigation, the examination of a fractured NLG main fitting showed that Messier-Dowty SB.146-32-150 had not been accomplished, although the records indicated that it had been. BAE Systems has determined that more NLG units could be similarly affected. These NLG units have been overhauled at Messier Services in Sterling,

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<tr><td></td><td>Virginia, in the United States.

This condition, if not corrected, could result in NLG failure.

To address this situation, EASA issued Emergency AD 2009-0043-E to require repetitive NDT inspections of each affected NLG unit and, if cracks are found, replacement with a serviceable unit, in accordance with the instructions of BAE Systems (Operations) Limited Alert Inspection Service Bulletin ISB.A32-180 and Messier-Dowty (M-D) SB 146-32-149.

Subsequently, investigation and analysis by M-D has identified the need for a reduction of the inspection threshold and the repetitive inspection interval for the affected NLG units and has replaced M-D SB 146-32-149 with M-D SB 146-32-174. Consequently, BAE Systems SB 32-158 has been withdrawn and superseded by BAE Systems Alert ISB.A32-180 revision 1.

For the reasons described above, this Emergency AD retains the requirements of UK CAA AD 002-06-2000 and EASA Emergency AD 2009-0043-E, both of which are superseded, requires repetitive NDT inspections of each affected NLG unit and, if cracks are found, replacement with a serviceable unit and reduces the threshold and interval of the repetitive NDT inspections.</td></tr>
<tr><td>Effective Date:</td><td>07 September 2009</td></tr>
<tr><td>Required Action(s) and Compliance Time(s):</td><td>Required as indicated, unless accomplished previously:

(1) Before next flight after the effective date of this AD, determine whether an affected NLG unit is installed on the aircraft, as identified in paragraph 1.A.(1) of BAE Systems (Operations) Limited Alert Inspection Service Bulletin ISB.A32-180 Revision 3 (the ISB). At the time indicated in Table 1 of this AD, as applicable, inspect each affected NLG unit in accordance with the instructions of M-D SB 146-32-174.

Table 1
<table><tr><th>NLG Status (on the effective date)</th><th>Inspection Compliance Time</th></tr><tr><td>Included in s/n list in paragraph 1.D Part 1 of the ISB</td><td>Before next flight after the effective date of this AD.</td></tr><tr><td>Accumulated less than 4 700 cycles since new (paragraph 1.D Part 2 of the ISB)</td><td>Before accumulating 5 000 cycles (of the NLG) since new</td></tr><tr><td>Accumulated 4 700 cycles or more since new and less than 2 200 cycles since the last inspection in accordance with M-D SB 146-32-149 (paragraph 1.D Part 3 of the ISB)</td><td>Before accumulating 300 cycles (of the NLG) or within 2 months, whichever occurs first after the effective date of this AD.</td></tr><tr><td>Accumulated 4 700 cycles or more since new and 2 200 cycles or more since the last inspection in accordance with M-D SB 146-32-149 (paragraph 1.D Part 4 of the ISB)</td><td>Before accumulating 2 500 cycles (of the NLG) since the last inspection in accordance with M-D SB 146-32-149</td></tr></table>
(2) Thereafter, at intervals not exceeding 300 cycles, repeat the inspection in accordance with M-D SB 146-32-174

(3) If a crack is found during any inspection in accordance with Messier-Dowty SB 146-32-174, before further flight, replace the NLG with a serviceable unit.

(4) Replacement of an affected NLG unit as required by paragraph (3) of this AD constitutes terminating action for the repetitive inspection requirements of paragraph (2) of this AD if the replacement NLG unit has been modified</td></tr>
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	in accordance with the requirements of Messier-Dowty SB 146-32-150, or if the replacement NLG is a P/N 201138002 unit with s/n M-DG-0169 or higher. (5) Modification of an affected NLG in accordance with M-D SB 146-32-150 constitutes terminating action for the repetitive inspection requirements of paragraph (2) of this AD for that NLG unit. (6) For an affected NLG unit that has had M-D SB 146-32-150 embodied by Messier Services in Sterling, Virginia, USA, verify that the SB has been embodied, in accordance with approved Messier-Dowty instructions. At the time of issuance of this AD, such instructions have not yet been published.
Ref. Publications:	BAE Systems (Operations) Limited Alert ISB.A32-180 Revision 1 dated 27 August 2009. Messier-Dowty SB 146-32-150 dated 22 May 2000 and Messier-Dowty SB 146-32-149 dated 17 April 2000, which has been replaced with Messier-Dowty SB 146-32-174 dated 26 August 2009. The use of later approved revisions of these documents is acceptable for compliance with the requirements of this AD.
Remarks :	1. If requested and appropriately substantiated, EASA can approve Alternative Methods of Compliance for this AD. 2. The safety assessment has requested not to implement the full consultation process and an immediate publication and notification. 3. Enquiries regarding this AD should be referred to the Airworthiness Directives, Safety Management & Research Section, Certification Directorate, EASA. E-mail: ADs@easa.europa.eu. 4. For any questions concerning the technical content of the requirements in this AD, please contact: BAE Systems (Operations) Ltd, Customer Information Department, Prestwick International Airport, Ayrshire, KA9 2RW, Scotland, United Kingdom; Telephone +44 1292 675207, Facsimile +44 1292 675704; E-mail: RApublications@baesystems.com