

EASA	AIRWORTHINESS DIRECTIVE
	<p>AD No.: 2012-0106</p> <p>Date: 14 June 2012</p> <p>Note: This 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.</p>
<p>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].</p>	
<p>Design Approval Holder's Name:</p> <p>BAE SYSTEMS (OPERATIONS) LTD</p>	<p>Type/Model designation(s):</p> <p>BAe 146 aeroplanes</p>
TCDS Number :	EASA.A.182
Foreign AD :	Not applicable
Supersedure :	This AD supersedes EASA AD 2006-0215 dated 14 July 2006.
ATA 53	Fuselage – Inspection of Longerons at Rib '0' – Inspection / Repair
Manufacturer(s):	British Aerospace plc, British Aerospace Regional Aircraft Ltd, British Aerospace (Commercial Aircraft) Ltd.
Applicability:	<p>BAe 146-100, all serial numbers;</p> <p>BAe 146-200, all serial numbers, except those incorporating modification HCM01709B or HCM01709C;</p> <p>BAe 146-300, all serial numbers, except those incorporating modification HCM01709A.</p> <p>Note: Where series -100, -200, -300 are mentioned, it must be assumed that this includes series -100A, -200A, -300A respectively.</p>
Reason:	<p>Reports of cracks on the centre fuselage top aft longeron at Rib '0' on an in-service aircraft were registered.</p> <p>Subsequent investigation indicated that the already defined threshold and repeat inspection period for that structure needed to be reduced, and the area of inspection expanded for the BAe146 series 100 and 200. For the BAe146 series 300, only the repeat inspection period needed to be reduced, and the area of inspection expanded.</p> <p>This condition if, not detected and corrected, could potentially reduce the top aft longeron at Rib "0" ability to support loads.</p> <p>To address this unsafe condition, BAE Systems (Operations) Limited published Inspection Service Bulletin No ISB.53-173 at Revision 2 and EASA issued AD 2006-0215 to require repetitive inspections of the longeron and,</p>

	<p>depending on findings, accomplishment of repair(s).</p> <p>After the issuance of EASA AD 2006-0215, BAE Systems (Operations) Ltd issued ISB.53-173 Revision 3, which primarily introduced changes to enable the BAe 146 Series 100 aeroplane to be correctly trestled. It was previously impossible to trestle the aeroplane using the instructions provided. The ISB.53-173 Revision 3 clarified the correct inspection regime to those BAe 146 Series 100 aeroplanes fitted with BAe 146 Series 300 longerons.</p> <p>BAE Systems (Operations) Ltd subsequently issued ISB.53-173 Revision 4, which corrected the jacking and trestling instructions for the BAe 146 Series 100 and Revision 5, which further clarifies the inspection requirements.</p> <p>For the reasons described above, this AD retains the requirements of EASA AD 2006-0215, which is superseded, and requires the implementation of the corrected inspection requirements introduced by ISB.53-173 Revisions 3, 4 and 5.</p>
Effective Date:	28 June 2012
Required Action(s) and Compliance Time(s):	<p>Required as indicated, unless accomplished previously:</p> <p>Note: Where series -100, -200, -300 are mentioned, it must be assumed that this includes series -100A, -200A, -300A respectively.</p> <p>(1) BAe 146 Series 100 aeroplanes and BAe 146 Series 200 aeroplanes which do not incorporate modification HCM01709B or HCM01709C:</p> <p>(1.1) <u>Inspection and repair of the six fasteners immediately aft of the subframe.</u></p> <p>(1.1.1) For aeroplanes that have <u>not</u> been inspected in accordance with MRBR SSI/SII Task No.53-20-140A (MPD task 532040-SDI-10000-3) or ISB.53-173 Revision 1, 2, 3 or 4:</p> <p>Inspect and, depending on finding, repair the six fasteners immediately aft of the subframe in accordance with paragraphs 2.B(1), 2.B(2) and 2.B(4) of Inspection Service Bulletin ISB.53-173 Revision 5 (the ISB) prior to whichever condition occurs later:</p> <p>17 000 flight cycles (FC) since the aeroplane first flight</p> <p>OR</p> <p>Within 500 FC from the effective date of this AD, but not exceeding 24 000 FC since the aeroplane first flight.</p> <p>Thereafter inspect and, depending on finding, repair the six fasteners immediately aft of the subframe in accordance with paragraphs 2.B(1), 2.B(2) and 2.B(4) of the ISB at intervals not to exceed 5 000 FC, until the aeroplane comes under the Supplemental Structural Inspections Document (SSID).</p> <p>(1.1.2) For aeroplanes that <u>have</u> been inspected in accordance with MRBR SSI/SII Task No.53-20-140A (MPD task 532040-SDI-10000-3) or ISB.53-173 Revision 1, 2, 3 or 4:</p> <p>Inspect and, depending on finding, repair the six fasteners immediately aft of the subframe in accordance with paragraphs 2.B(1), 2.B(2) and 2.B(4) of the ISB prior to whichever condition occurs later:</p> <p>5 400 FC since last inspection</p> <p>OR</p> <p>Within 500 FC from the effective date of this AD, but not exceeding 12 000 FC since last inspection.</p> <p>Thereafter inspect and, depending on finding, repair the six fasteners immediately aft of the subframe in accordance with paragraphs 2.B(1), 2.B(2)</p>

and 2.B(4) of the ISB at intervals not to exceed 5 000 FC until the aeroplane comes under the SSID.

(1.1.3) For aeroplanes that have had a replacement aft longeron installed:

Inspect and, depending on finding, repair the six fasteners immediately aft of the subframe in accordance with paragraphs 2.B(1), 2.B(2) and 2.B(4) of the ISB prior to 17 000 FC following replacement.

Thereafter inspect and, depending on finding, repair the six fasteners immediately aft of the subframe in accordance with paragraphs 2.B(1), 2.B(2) and 2.B(4) of the ISB at intervals not to exceed 5 000 FC until the aeroplane comes under the SSID.

NOTE: The threshold for an aeroplane is reset if a replacement longeron is fitted.

(1.2) Inspection and repair of the other fasteners between the subframe and frame 30.

(1.2.1) For specified aeroplanes that have not been inspected in accordance with ISB.53-173 Revision 2, 3 or 4:

(1.2.1.1) For BAe 146 Series 100 aeroplanes which do not incorporate modification HCM00851A and BAe 146 Series 200 aeroplanes:

Inspect and, depending on finding, repair the other fasteners between the subframe and frame 30 in accordance with paragraphs 2.B(3) and 2.B(4) of the ISB prior to whichever condition occurs later:

17 000 FC since the aeroplane first flight

OR

Within 4 000 FC from the effective date of this AD.

Thereafter inspect and, depending on finding, repair the other fasteners between the subframe and frame 30 in accordance with paragraphs 2.B(5) and 2.B(6) of the ISB at intervals not to exceed 11 900 FC until the aeroplane comes under the SSID.

(1.2.1.2) For BAe 146 Series 100 aeroplanes which do incorporate modification HCM00851A:

Inspect and, depending on finding, repair the other fasteners between the subframe and frame 30 in accordance with paragraphs 2.B(7) and 2.B(8) of the ISB prior to whichever condition occurs later:

17 000 FC since the aeroplane first flight

OR

Within 4 000 FC from the effective date of this AD.

Thereafter inspect and, depending on finding, repair the other fasteners between the subframe and frame 30 in accordance with paragraphs 2.B(7) and 2.B(8) of the ISB at intervals not to exceed 11 900 FC until the aeroplane comes under the SSID.

(1.2.2) For specified aeroplanes that have been inspected in accordance with ISB.53-173 Revision 2, 3 or 4:

(1.2.2.1) For BAe 146 Series 100 aeroplanes which do not incorporate modification HCM00851A and BAe 146 Series 200 aeroplanes:

Inspect and, depending on finding, repair the other fasteners between the subframe and frame 30 in accordance with paragraphs 2.B(5) and 2.B(6) of the ISB at intervals not to exceed 11 900 FC until the aeroplane comes under the SSID.

(1.2.2.2) For BAe 146 Series 100 aeroplanes which do incorporate modification HCM00851A:

Inspect and, depending on finding, repair the other fasteners between the subframe and frame 30 in accordance with paragraphs 2.B(7) and 2.B(8) of the ISB at intervals not to exceed 11 900 FC until the aeroplane comes under the SSID.

(1.2.3) For aeroplanes that have had a replacement aft longeron installed:

(1.2.3.1) For BAe 146 Series 100 aeroplanes which do not incorporate modification HCM00851A and BAe 146 Series 200 aeroplanes:

Inspect and, depending on finding, repair the other fasteners between the subframe and frame 30 in accordance with paragraphs 2.B(3) and 2.B(4) of the ISB prior to 17 000 FC following replacement.

Thereafter inspect and, depending on finding, repair the other fasteners between the subframe and frame 30 in accordance with paragraphs 2.B(5) and 2.B(6) of the ISB at intervals not to exceed 11 900 FC until the aeroplane comes under the SSID.

(1.2.3.2) For BAe 146 Series 100 aeroplanes which do incorporate modification HCM00851A:

Inspect and, depending on finding, repair the other fasteners between the subframe and frame 30 in accordance with paragraphs 2.B(7) and 2.B(8) of the ISB prior to 17 000 FC following replacement.

Thereafter inspect and, depending on finding, repair the other fasteners between the subframe and frame 30 in accordance with paragraphs 2.B(7) and 2.B(8) of the ISB at intervals not to exceed 11 900 FC until the aeroplane comes under the SSID.

NOTE: The threshold for an aeroplane is reset if a replacement longeron is fitted.

(2) BAe 146 Series 300 aeroplanes which do not incorporate modification HCM01709A:

(2.1) Inspection and repair of the six fasteners immediately aft of the subframe.

(2.1.1) For aeroplanes that have not been inspected in accordance with MRBR SSI/SII Task No.53-20-140A (MPD task 532040-SDI-10000-3) or ISB.53-173 Revision 1, 2, 3 or 4:

Inspect and, depending on finding, repair the six fasteners immediately aft of the subframe in accordance with paragraphs 2.B(1), 2.B(2) and 2.B(8) of the ISB prior to 24 000 FC since the aeroplane first flight.

Thereafter inspect and, depending on finding, repair the six fasteners immediately aft of the subframe in accordance with paragraphs 2.B(1), 2.B(2) and 2.B(8) of the ISB at intervals not to exceed 4 000 FC until the aeroplane comes under the SSID.

(2.1.2) For aeroplanes that have been inspected in accordance with MRBR SSI/SII Task No.53-20-140A (MPD task 532040-SDI-10000-3) or ISB.53-173 Revision 1, 2, 3 or 4:

Inspect and, depending on finding, repair the six fasteners immediately aft of the subframe in accordance with paragraphs 2.B(1), 2.B(2) and 2.B(8) of the ISB prior to whichever condition occurs later:

4 000 FC since last inspection

OR

Within 500 FC from the effective date of this AD, but not exceeding 12 000 FC since last inspection.

Thereafter inspect and, depending on finding, repair the six fasteners immediately aft of the subframe in accordance with paragraphs 2.B(1), 2.B(2) and 2.B(8) of the ISB at intervals not to exceed 4 000 FC until the aeroplane

	<p>comes under the SSID.</p> <p>(2.1.3) For aeroplanes that have had a replacement aft longeron installed: Inspect and, depending on finding, repair the six fasteners immediately aft of the subframe in accordance with paragraphs 2.B(1), 2.B(2) and 2.B(8) of the ISB prior to achieving 24 000 FC following replacement.</p> <p>Thereafter inspect and, depending on finding, repair the six fasteners immediately aft of the subframe in accordance with paragraphs 2.B(1), 2.B(2) and 2.B(8) of the ISB at intervals not to exceed 4 000 FC until the aeroplane comes under the SSID.</p> <p>NOTE: The threshold for an aircraft is reset if a replacement longeron is fitted.</p> <p>(2.2) <u>Inspection and repair of the other fasteners between the subframe and frame 30.</u></p> <p>(2.2.1) For aeroplanes that have <u>not</u> been inspected in accordance with ISB.53-173 Revision 2, 3 or 4:</p> <p>Inspect and, depending on finding, repair the other fasteners between the subframe and frame 30 in accordance with paragraphs 2.B(7) and 2.B(8) of the ISB prior to whichever condition occurs later:</p> <p>24 000 FC since the aeroplane first flight</p> <p>OR</p> <p>Within 4 000 FC from the effective date of this AD.</p> <p>Thereafter inspect and, depending on finding, repair the other fasteners between the subframe and frame 30 in accordance with paragraphs 2.B(7) and 2.B(8) of the ISB at intervals not to exceed 11 900 FC until the aeroplane comes under the SSID.</p> <p>(2.2.2) For aeroplanes that <u>have</u> been inspected in accordance with ISB.53-173 Revision 2, 3 or 4:</p> <p>Inspect and, depending on finding, repair the other fasteners between the subframe and frame 30 in accordance with paragraphs 2.B(7) and 2.B(8) of the ISB at intervals not to exceed 11 900 FC until the aeroplane comes under the SSID.</p> <p>(2.2.3) For aeroplanes that have had a replacement aft longeron installed: Inspect and, depending on finding, repair the other fasteners between the subframe and frame 30 in accordance with paragraphs 2.B(7) and 2.B(8) of the ISB prior to achieving 24 000 FC following replacement.</p> <p>Thereafter inspect and, depending on finding, repair the other fasteners between the subframe and frame 30 in accordance with paragraphs 2.B(7) and 2.B(8) of the ISB at intervals not to exceed 11 900 FC until the aeroplane comes under the SSID.</p> <p>NOTE: The threshold for an aircraft is reset if a replacement longeron is fitted.</p>
Ref. Publications:	<p>BAE SYSTEMS (Operations) Limited Inspection Service Bulletin ISB.53-173 Revision 5 dated 17 October 2011.</p> <p>The use of later approved revisions of this document is acceptable for compliance with the requirements of this AD.</p>
Remarks :	<ol style="list-style-type: none"> 1. If requested and appropriately substantiated, EASA can approve Alternative Methods of Compliance for this AD. 2. This AD was posted on 09 May 2012 as PAD 12-041 for consultation until 06 June 2012. The Comment Response Document can be found at http://ad.easa.europa.eu. 3. Enquiries regarding this AD should be referred to the Safety Information

	<p>Section, Executive Directorate, EASA. E-mail ADs@easa.europa.eu.</p> <p>4. For any question 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, The United Kingdom; Telephone +44 1292 675207, Facsimile +44 1292 675704; E-mail: RApublications@baesystems.com.</p>
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