


EASA	AIRWORTHINESS DIRECTIVE	
	AD No.: 2015-0100	
	Date: 03 June 2015	
<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 EU 748/2012, Part 21.A.3B. In accordance with EU 1321/2014 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 [EU 1321/2014 Annex I, Part M.A.303] or agreed with the Authority of the State of Registry [EC 216/2008, Article 14(4) exemption].</p>		
Design Approval Holder's Name:		Type/Model designation(s):
BAE SYSTEMS (OPERATIONS) Ltd		Jetstream 4100 aeroplanes
TCDS Number:	EASA.A.189	
Foreign AD:	Not applicable	
Supersedure:	This AD supersedes EASA AD 2011-0096 dated 25 May 2011.	
ATA 57		
Wings – Wing Rear Spar – Inspection / Repair		
Manufacturer(s):	British Aerospace plc, British Aerospace (Commercial Aircraft) Ltd, British Aerospace Regional Aircraft Ltd, Jetstream Aircraft Ltd and British Aerospace (Operations) Ltd.	
Applicability:	Jetstream 4100 aeroplanes, all models, all serial numbers.	
Reason:	<p>During an investigation of a fuel leak on the rear spar of a Jetstream 4100 aeroplane, 4 cracks were found between Ribs 6 and 7 (immediately inboard of the inboard engine rib). The cracks initiated at adjacent fastener bores in the rear spar upper boom, and progressed downwards, diagonally, into the rear spar web.</p> <p>These cracks, if not detected and corrected, could propagate to a critical length, affecting the structural integrity of the area, possibly resulting in a fuel tank rupture with consequent damage to the aeroplane and injury to occupants.</p> <p>Prompted by these findings, EASA issued AD 2011-0096 to require a one-time inspection of the rear face of the wing rear spar and the accomplishment of applicable corrective actions, depending on findings. Initial analysis of the event did not lead to the conclusion that the cracking was fatigue related, therefore AD 2011-0096 did not require repetitive inspections.</p> <p>Since that AD was issued, the results of the technical analysis confirmed that the cracks were due to fatigue, with no indication of any other crack initiation mechanism (e.g. stress corrosion). In addition, further similar in-service events have been reported. During investigation of those events, further metallurgical analysis indicated that the crack initiation and propagation are indeed fatigue</p>	

	<p>driven and occur at the same location.</p> <p>To address this unsafe condition, a review of the inspection interval was undertaken based on the cracks from both aeroplanes and BAE Systems (Operations) Ltd issued Service Bulletin (SB) J41-A57-029 Revision 3 in order to reduce the inspection interval of the wing rear spar from 2 000 flight cycles (FC) to 1 600 FC.</p> <p>For the reasons described above, this AD supersedes EASA AD 2011-0096, without retaining its requirements, introduces repetitive inspections and, depending on findings, requires the accomplishment of applicable corrective action(s).</p>
Effective Date:	17 June 2015
Required Action(s) and Compliance Time(s):	<p>Required as indicated, unless accomplished previously:</p> <ol style="list-style-type: none"> (1) Within 30 days after the effective date of this AD, or within 1 600 FC since the last inspection in accordance with the instructions of BAE Systems (Operations) Ltd SB J41-A57-029 (original issue, or Revision 1, or Revision 2), whichever occurs later, and, thereafter, at intervals not to exceed 1 600 FC, accomplish a detailed visual inspection (DVI) of the rear face of the rear spar in accordance with the instructions of BAE Systems (Operations) Ltd SB J41-A57-029 Revision 3. (2) If, during any DVI as required by paragraph (1) of this AD, any damage is found within the criteria as specified in BAE Systems (Operations) Ltd Jetstream 4100 Structural Repair Manual (SRM) 57-00-00, before next flight, repair the affected area in accordance with the instructions of the approved SRM. (3) If, during any DVI as required by paragraph (1) of this AD, any damage is found outside SRM limits, before next flight, contact BAE Systems (Operations) Ltd for approved repair instructions and accomplish those instructions accordingly. (4) Repair of an aeroplane as required by paragraph (2) or (3) of this AD does not constitute terminating action for the repetitive inspections as required by paragraph (1) of this AD for that aeroplane, unless the approved repair instructions state otherwise.
Ref. Publications:	<p>BAE Systems (Operations) Ltd SB J41-A57-029 Revision 3 dated 08 April 2014.</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 29 April 2015 as PAD 15-054 for consultation until 27 May 2015. No comments were received during the consultation period. 3. Enquiries regarding this AD should be referred to the Safety Information Section, Certification Directorate, EASA. E-mail: ADs@easa.europa.eu. 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, United Kingdom; Telephone +44 1292 675207, Facsimile +44 1292 675704; E-mail: RApublications@baesystems.com.