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| <b>EASA</b>  | <b>AIRWORTHINESS DIRECTIVE</b>  |   |
|   | <p><b>AD No.: 2011-0020R1</b></p> <p><b>Date: 29 February 2012</b></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><b>Type Approval Holder's Name :</b></p> <p>Diamond Aircraft Industries GmbH</p>  |   | <p><b>Type/Model designation(s) :</b></p> <p>DA 42 and DA 42 M aeroplanes</p> |
| <p>TCDS Number: EASA.A.005, EASA.A.513</p>   |   |   |
| <p>Foreign AD: Not applicable</p>  |   |   |
| <p>Revision: This AD revises EASA AD 2011-0020 dated 07 February 2011, which superseded EASA AD 2010-0155R1 dated 08 September 2010.</p>   |   |   |
| <b>ATA 32</b>  | <b>Landing Gear – Main Landing Gear Damper-to-Trailing Arm Joints – Inspection / Replacement</b>  |   |
| <p>Manufacturer(s): Diamond Aircraft Industries GmbH (DAI), Diamond Aircraft Industries Inc. (Canada)</p>  |   |   |
| <p>Applicability: DA 42 and DA 42 M aeroplanes, all serial numbers</p>   |   |   |
| <p>Reason:</p> <p>Cracks have been reportedly found on DA 42 Main Landing Gear (MLG) Damper-to-Trailing Arm joints during standard maintenance. Depending on environmental-, operating- and runway conditions, the affected MLG joint, Part Number (P/N) D60-3217-23-5x (4 different lengths are available), which is made of aluminium, is susceptible to cracking.</p> <p>This condition, if not detected and corrected, may lead to failure of the joint and subsequent damage or malfunction of the MLG, possibly resulting in damage to the aeroplane during landing and injury to occupants.</p> <p>To address this unsafe condition, EASA issued AD 2010-0155 to require repetitive inspections of the MLG joint and, depending on findings, replacement with a serviceable part. Since that AD was issued, DAI developed an improved design MLG joint, P/N D64-3217-23-0x (also 4 different lengths available), which is made of steel and less susceptible to cracking.</p> <p>Consequently, EASA issued AD 2011-0020, retaining the requirements of EASA AD 2010-0155R1, which was superseded, and adding the terminating action requirement to modify the aeroplane by installing the improved steel part. AD 2011-0020 also prohibited re-installation of the aluminium part.</p> <p>Since EASA AD 2011-0020 was issued, no further case of crack has been reported. The result of the safety assessment substantiated that continued repetitive inspections, at the intervals defined in EASA AD 2011-0020, provide</p> |   |   |

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|  | an adequate level of safety. Based on this result, EASA AD 2011-0020 is revised to extend the compliance time for the replacement of MLG joint by 3 months.   |
| Effective Date:                            | Revision 1: 14 March 2012<br>Original issue: 21 February 2011   |
| Required Action(s) and Compliance Time(s): | <p>Required as indicated, unless accomplished previously:</p> <ol style="list-style-type: none"> <li>(1) Within 20 flight hours (FH) after 12 August 2010 [the effective date of EASA AD 2010-0155] and thereafter at each scheduled 100 FH inspection, perform the inspection of the MLG joint P/N D60-3217-23-5x in accordance with the instructions of DAI MSB-42-088 and the associated Work Instruction WI-MSB-42-088.</li> <li>(2) If, during any inspection as required by paragraph (1) of this AD, cracks are detected, before next flight, replace the affected MLG joint P/N D60-3217-23-5x in accordance with the instructions of DAI MSB-42-088 and the associated Work Instruction WI-MSB-42-088.</li> <li>(3) Inspections and corrective actions accomplished prior to the effective date of this AD, in accordance with DAI MSB-42-088 at original issue or Revision 1, are acceptable to comply with the initial requirements of paragraphs (1) and (2) of this AD. After the effective date of this AD, repetitive inspections and corrective actions must be accomplished in accordance with DAI MSB-42-088 at Revision 2.</li> <li>(4) Unless already accomplished as required by paragraph (2) of this AD, within 15 months after 21 February 2011 [the effective date of the original issue of this AD], replace each MLG joint P/N D60-3217-23-5x with a MLG joint P/N D64-3217-23-0x in accordance with the instructions of DAI MSB-42-088 Revision 2 and the associated Work Instruction WI-MSB-42-088.</li> <li>(5) Modification of an aeroplane as required by paragraph (4) of this AD constitutes terminating action for the repetitive inspections as required by paragraph (1) of this AD.</li> <li>(6) After modification of an aeroplane as required by paragraph (4) of this AD, or, for an aeroplane that already has MLG joints P/N D64-3217-23-0x installed, from the effective date of this AD, do not install a MLG joint P/N D60-3217-23-5x on that aeroplane.</li> </ol> |
| Ref. Publications:                         | <p>Diamond Aircraft Industries GmbH Mandatory Service Bulletin MSB-42-088/2 (Revision 2) dated 03 February 2011 and the associated Work Instruction WI-MSB-42-088 Revision 1 dated 03 February 2011.</p> <p>The use of later approved revisions of these documents is acceptable for compliance with the requirements of this AD.</p>   |
| Remarks :                                  | <ol style="list-style-type: none"> <li>1. If requested and appropriately substantiated, EASA can approve Alternative Methods of Compliance for this AD.</li> <li>2. The required actions and the risk allowance have granted the issuance of a Final AD with Request for Comments, postponing the public consultation process after publication.</li> <li>3. Enquiries regarding this AD should be referred to the Safety Information Section, Executive Directorate, EASA. E-mail: <a href="mailto:ADs@easa.europa.eu">ADs@easa.europa.eu</a>.</li> <li>4. For any question concerning the technical content of the requirements in this AD, please contact:<br/>Diamond Aircraft Industries GmbH, Austria.<br/>Telephone +43 2622 26700, Facsimile +43 2622 26780,<br/>E-mail <a href="mailto:office@diamond-air.at">office@diamond-air.at</a>.</li> </ol>  |