



Airworthiness Directive

AD No.: 2016-0203

Issued: 10 October 2016

Note: This Airworthiness Directive (AD) is issued by EASA, acting in accordance with Regulation (EC) 216/2008 on behalf of the European Union, 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 Regulation (EU) 748/2012, Part 21.A.3B. In accordance with Regulation (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 [Regulation (EU) 1321/2014 Annex I, Part M.A.303] or agreed with the Authority of the State of Registry [Regulation (EC) 216/2008, Article 14(4) exemption].

Design Approval Holder's Name:

DIAMOND AIRCRAFT INDUSTRIES GmbH

Type/Model designation(s):

DA 40 NG aeroplanes

Effective Date: 24 October 2016

TCDS Number(s): EASA.A.022

Foreign AD: Not applicable

Supersedure: None

ATA 81 – Turbocharging – V-band Clamps – Inspection / Replacement

Manufacturer(s):

Diamond Aircraft Industries (DAI) GmbH (Austria)

Applicability:

DA 40 NG aeroplanes, all manufacturer serial numbers, including aeroplanes converted from DA 40 D aeroplanes through embodiment of Optional Service Bulletin D4-080.

Reason:

Failures of V-clamps, Part Number (P/N) E4A-41-000-002, installed on the turbochargers, have been reported on DA 40 NG aeroplanes. One of the failures resulted in engine power loss and subsequent emergency landing. Preliminary investigations identified a manufacturing quality deficiency in a batch of V-clamps as the possible cause of these failures.

This condition, if not detected and corrected, could lead to further occurrences of engine power loss, possibly resulting in an emergency landing with consequent damage to the aeroplane and injury to occupants.

To address this potential unsafe condition, DAI designed an improved V-clamp, P/N D44-9081-26-03, and issued Mandatory Service Bulletin (MSB) 40NG-046 (later revised), providing instructions to identify all the parts suspected to be part of the affected batch, and to replace these



with the new V-clamp. The MSB also introduces repetitive inspections of all turbocharger V-clamps, irrespective of P/N.

For the reasons described above, this AD requires repetitive visual inspections of the V-clamps and, depending on findings, replacement. This AD also requires replacement of certain V-clamps with improved clamps.

Required Action(s) and Compliance Time(s):

Required as indicated, unless accomplished previously:

Note 1: For the purpose of this AD, a “pre-mod clamp” is a V-clamp having Austro Engine P/N E4A-41-000-002; a “post-mod clamp” is a V-clamp having P/N D44-9081-26-03; an “affected clamp” is a pre-mod clamp, for which the date of first installation on an aeroplane cannot be determined as before 01 January 2015.

- (1) Within 50 flight hours (FH) or within 2 months, whichever occurs first after the effective date of this AD, and, thereafter, at intervals not to exceed 100 FH (see Note 2 of this AD), inspect the V-clamp in accordance with the instructions of DAI MSB 40NG-046 revision (rev.) 2.

Note 2: A non-cumulative tolerance of 10% may be applied to the compliance times specified in this AD to allow synchronization of the required inspections with other maintenance tasks for which a non-cumulative tolerance is already granted in the applicable DAI Maintenance Manual.

- (2) If, during the inspection as required by paragraph (1) of this AD, any crack or incorrect installation is found in a V-clamp, before next flight, replace that V-clamp with a post-mod clamp (see Note 1 of this AD) in accordance with the instructions of DAI MSB 40NG-046 rev. 2.
- (3) Inspection and, depending on findings, corrective action on an aeroplane, accomplished before the effective date of this AD in accordance with the instructions of DAI MSB 40NG-046 at original issue, or rev. 1, is acceptable to comply with the initial requirements of paragraphs (1) and (2) of this AD for that aeroplane.
- (4) Irrespective of findings during the inspection as required by paragraph (1) of this AD, within 100 FH (see Note 2 of this AD) or within 4 months, whichever occurs first after the effective date of this AD, replace any affected clamp with a post-mod clamp, in accordance with the instructions of DAI MSB 40NG-046 rev. 2.
- (5) Do not install on any aeroplane a pre-mod clamp, as required by paragraph (5.1) or (5.2) of this AD, as applicable.
 - (5.1) For an aeroplane having a pre-mod clamp installed: After modification of that aeroplane as required by paragraph (2) or (4) of this AD.
 - (5.2) For an aeroplane that does not have a pre-mod clamp installed: From the effective date of this AD.



- (6) Installation on an aeroplane of V-clamp, having a P/N approved after the effective date of this AD, is allowed, provided the conditions as specified in paragraphs (6.1) and (6.2) of this AD are met.
- (6.1) The P/N must be approved by EASA, or approved under DAI Design Organisation Approval (DOA); and
- (6.2) The installation must be accomplished in accordance with aeroplane modification instructions approved by EASA, or approved under DAI DOA.
- (7) Replacement of a V-band clamp on an aeroplane, as required by paragraph (2) or (4) of this AD, or as specified in paragraph (6) of this AD, as applicable, does not constitute terminating action for the repetitive inspections required by paragraph (1) of this AD for that aeroplane.

Ref. Publications:

DAI MSB 40NG-046 original issue, dated 30 June 2016, or revision 1, dated 14 July 2016, or revision 2, dated 22 July 2016.

The use of later approved revisions of this document 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. This AD was posted on 28 July 2016 as PAD 16-114 for consultation until 25 August 2016. No comments were received during the consultation period.
3. Enquiries regarding this AD should be referred to the EASA Safety Information Section, Certification Directorate. E-mail: ADs@easa.europa.eu.
4. For any question concerning the technical content of the requirements in this AD, please contact: Diamond Aircraft Industries GmbH, Austria.
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