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DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

14 CFR Part 39

[Docket No. FAA-2016-9369; Directorate Identifier 2016-CE-034-AD; Amendment 39-18710; AD 2016-23-03]

RIN 2120-AA64

Airworthiness Directives; Diamond Aircraft Industries GmbH Airplanes

AGENCY: Federal Aviation Administration (FAA), DOT.

ACTION: Final rule; request for comments.

SUMMARY: We are adopting a new airworthiness directive (AD) for all Diamond Aircraft Industries GmbH Model DA 40 NG airplanes. This AD results from mandatory continuing airworthiness information (MCAI) issued by the aviation authority of another country to identify and correct an unsafe condition on an aviation product. The MCAI describes the unsafe condition as possible loss of engine power and emergency landing with consequent damage to the airplane and occupant injury caused by a manufacturing quality deficiency in a batch of V-clamps that could cause the V-clamp to crack and fail. We are issuing this AD to require actions to address the unsafe condition on these products.

DATES: This AD is effective November 29, 2016.

The Director of the Federal Register approved the incorporation by reference of certain publications listed in this AD as of November 29, 2016.

We must receive comments on this AD by December 27, 2016.

ADDRESSES: You may send comments by any of the following methods:

- Federal eRulemaking Portal: Go to <http://www.regulations.gov>. Follow the instructions for submitting comments.
- Fax: (202) 493-2251.
- Mail: U.S. Department of Transportation, Docket Operations, M-30, West Building Ground Floor, Room W12-140, 1200 New Jersey Avenue SE., Washington, DC 20590.
- Hand Delivery: U.S. Department of Transportation, Docket Operations, M-30, West Building Ground Floor, Room W12-140, 1200 New Jersey Avenue SE., Washington, DC 20590, between 9 a.m. and 5 p.m., Monday through Friday, except Federal holidays.

For service information identified in this AD, contact Diamond Aircraft Industries GmbH, N.A. Otto-Straße 5, A-2700 Wiener Neustadt, Austria, telephone: +43 2622 26700; fax: +43 2622 26780; email: office@diamond-air.at; Internet: <http://www.diamondaircraft.com>. You may view this referenced service information at the FAA, Small Airplane Directorate, 901 Locust, Kansas City, Missouri 64106. For information on the availability of this material at the FAA, call (816) 329-4148. It is also available on the Internet at <http://www.regulations.gov> by searching for locating Docket No. FAA-2016-9369.

Examining the AD Docket

You may examine the AD docket on the Internet at <http://www.regulations.gov> by searching for and locating Docket No. FAA-2016-9369; or in person at the Docket Management Facility between 9 a.m. and 5 p.m., Monday through Friday, except Federal holidays. The AD docket contains this AD, the regulatory evaluation, any comments received, and other information. The street address for the Docket Office (telephone (800) 647-5527) is in the ADDRESSES section. Comments will be available in the AD docket shortly after receipt.

FOR FURTHER INFORMATION CONTACT: Mike Kiesov, Aerospace Engineer, FAA, Small Airplane Directorate, 901 Locust, Room 301, Kansas City, Missouri 64106; telephone: (816) 329-4144; fax: (816) 329-4090; email: mike.kiesov@faa.gov.

SUPPLEMENTARY INFORMATION: Discussion

The European Aviation Safety Agency (EASA), which is the Technical Agent for the Member States of the European Community, has issued AD No. 2016-0203, dated October 10, 2016 (referred to after this as "the MCAI"), to correct an unsafe condition for the specified products. The MCAI states:

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.

You may examine the MCAI on the Internet at <http://www.regulations.gov> by searching for and locating Docket No. FAA-2016-9369.

Related Service Information Under 1 CFR Part 51

Diamond Aircraft Industries GmbH has issued Mandatory Service Bulletin MSB 40NG-046/2, dated July 22, 2016, and Work Instruction WI-MSB 40NG-046, dated July 14, 2016. In combination, this service information describes procedures for inspecting the V-clamp for cracks and for correct installation and for replacing cracked and incorrectly installed V-clamps with parts of improved design. This service information is reasonably available because the interested parties have access to it through their normal course of business or by the means identified in the ADDRESSES section of this AD.

FAA's Determination and Requirements of This AD

This product has been approved by the aviation authority of another country, and is approved for operation in the United States. Pursuant to our bilateral agreement with this State of Design Authority, they have notified us of the unsafe condition described in the MCAI and service information referenced above. We are issuing this AD because we evaluated all information provided by the State of Design Authority and determined the unsafe condition exists and is likely to exist or develop on other products of the same type design.

FAA's Determination of the Effective Date

An unsafe condition exists that requires the immediate adoption of this AD. The FAA has found that the risk to the flying public justifies waiving notice and comment prior to adoption of this rule because a manufacturing quality deficiency in a batch of V-clamps could cause the V-clamp to crack and fail. Failure of the V-clamp could result in loss of engine power and possible emergency landing, which could result in damage to the airplane and occupant injury. Therefore, we determined that notice and opportunity for public comment before issuing this AD are impracticable and that good cause exists for making this amendment effective in fewer than 30 days.

Comments Invited

This AD is a final rule that involves requirements affecting flight safety, and we did not precede it by notice and opportunity for public comment. We invite you to send any written relevant data, views, or arguments about this AD. Send your comments to an address listed under the ADDRESSES section. Include "Docket No. FAA-2016-9369; Directorate Identifier 2016-CE-034-AD" at the beginning of your comments. We specifically invite comments on the overall regulatory, economic, environmental, and energy aspects of this AD. We will consider all comments received by the closing date and may amend this AD because of those comments.

We will post all comments we receive, without change, to <http://www.regulations.gov>, including any personal information you provide. We will also post a report summarizing each substantive verbal contact we receive about this AD.

Costs of Compliance

We estimate that this AD will affect 22 products of U.S. registry. We also estimate that it will take about 1 work-hour per product to comply with the inspection requirements of this AD. The average labor rate is \$85 per work-hour.

Based on these figures, we estimate the cost of the inspection in this AD on U.S. operators to be \$1,870, or \$85 per product.

We also estimate that it will take about 1 work-hour per product to comply with the replacement requirement of this AD. The average labor rate is \$85 per work-hour. Required parts will cost about \$75 per product.

Based on these figures, we estimate the cost of the replacement in this AD on U.S. operators to be \$3,520, or \$160 per product.

Paperwork Reduction Act

A federal agency may not conduct or sponsor, and a person is not required to respond to, nor shall a person be subject to penalty for failure to comply with a collection of information subject to the requirements of the Paperwork Reduction Act unless that collection of information displays a current valid OMB control number. The control number for the collection of information required by this AD is 2120-0056. The paperwork cost associated with this AD has been detailed in the Costs of Compliance section of this document and includes time for reviewing instructions, as well as completing and reviewing the collection of information. Therefore, all reporting associated with this AD is mandatory. Comments concerning the accuracy of this burden and suggestions for reducing the burden should be directed to the FAA at 800 Independence Ave. SW., Washington, DC 20591. ATTN: Information Collection Clearance Officer, AES-200.

Authority for This Rulemaking

Title 49 of the United States Code specifies the FAA's authority to issue rules on aviation safety. Subtitle I, section 106, describes the authority of the FAA Administrator. "Subtitle VII: Aviation Programs," describes in more detail the scope of the Agency's authority.

We are issuing this rulemaking under the authority described in "Subtitle VII, Part A, Subpart III, section 44701: General requirements." Under that section, Congress charges the FAA with promoting safe flight of civil aircraft in air commerce by prescribing regulations for practices, methods, and procedures the Administrator finds necessary for safety in air commerce. This regulation is within the scope of that authority because it addresses an unsafe condition that is likely to exist or develop on products identified in this rulemaking action.

Regulatory Findings

We determined that this AD will not have federalism implications under Executive Order 13132. This AD will not have a substantial direct effect on the States, on the relationship between the national Government and the States, or on the distribution of power and responsibilities among the various levels of government.

For the reasons discussed above, I certify that this AD:

- (1) Is not a "significant regulatory action" under Executive Order 12866,
- (2) Is not a "significant rule" under the DOT Regulatory Policies and Procedures (44 FR 11034, February 26, 1979),
- (3) Will not affect intrastate aviation in Alaska, and
- (4) Will not have a significant economic impact, positive or negative, on a substantial number of small entities under the criteria of the Regulatory Flexibility Act.

List of Subjects in 14 CFR Part 39

Air transportation, Aircraft, Aviation safety, Incorporation by reference, Safety.

Adoption of the Amendment

Accordingly, under the authority delegated to me by the Administrator, the FAA amends 14 CFR part 39 as follows:

PART 39–AIRWORTHINESS DIRECTIVES

1. The authority citation for part 39 continues to read as follows:

Authority: 49 U.S.C. 106(g), 40113, 44701.

§ 39.13 [Amended]

2. The FAA amends § 39.13 by adding the following new AD:



2016-23-03 Diamond Aircraft Industries GmbH: Amendment 39-18710; Docket No. FAA-2016-9369; Directorate Identifier 2016-CE-034-AD.

(a) Effective Date

This airworthiness directive (AD) becomes effective November 29, 2016.

(b) Affected ADs

None.

(c) Applicability

This AD applies to Diamond Aircraft Industries GmbH Model DA 40 NG airplanes, all serial numbers, certificated in any category.

(d) Subject

Air Transport Association of America (ATA) Code 81: Turbocharging.

(e) Reason

This AD was prompted by mandatory continuing airworthiness information (MCAI) issued by the aviation authority of another country to identify and correct an unsafe condition on an aviation product. The MCAI describes the unsafe condition as manufacturing quality deficiency in a batch of V-clamps that could cause the V-clamp to crack and fail. We are issuing this AD to prevent failure of the V-clamp and possible loss of engine power, which could result in emergency landing with consequent damage to the airplane and occupant injury.

(f) Actions and Compliance

Unless already done, do the following actions.

(1) Within the next 50 hours time-in-service (TIS) after November 29, 2016 (the effective date of this AD) or within the next 2 months after November 29, 2016 (the effective date of this AD), whichever occurs first, and repetitively thereafter at intervals not to exceed 100 hours TIS, inspect the V-clamp following the Instructions section in Diamond Aircraft Industries GmbH (DAI) Work Instruction WI-MSB 40NG-046, dated July 14, 2016, as specified in DAI Mandatory Service Bulletin MSB 40NG-046/2, dated July 22, 2016.

(2) If any crack or incorrect installation is found during any inspection required in paragraph (f)(1) of this AD, before further flight, replace the V-clamp with an improved V-clamp, P/N D44-9081-26-03. After this replacement, continue with the 100 hour TIS repetitive inspection required in paragraph (f)(1) of this AD. Do the replacement following the Instructions section in Diamond Aircraft Industries GmbH (DAI) Work Instruction WI-MSB 40NG-046, dated July 14, 2016, as specified in DAI Mandatory Service Bulletin MSB 40NG-046/2, dated July 22, 2016.

(3) Unless already replaced as required in paragraph (f)(2) of this AD, within the next 100 hours TIS after November 29, 2016 (the effective date of this AD) or within the next 4 months after November 29, 2016 (the effective date of this AD), whichever occurs first, replace P/N E4A-41-000-002 V-clamp with an improved P/N D44-9081-26-03 V-clamp. After this replacement, continue with the 100 hour TIS repetitive inspection required in paragraph (f)(1) of this AD. Do the replacement following the Instructions section in Diamond Aircraft Industries GmbH (DAI) Work Instruction WI-MSB 40NG-046, dated July 14, 2016, as specified in DAI Mandatory Service Bulletin MSB 40NG-046/2, dated July 22, 2016.

(4) Within 10 days after each inspection required in paragraph (f)(1) of this AD, report the results to DAI at the address in paragraph (i)(3) of this AD using the Execution Report on page 3 of DAI Mandatory Service Bulletin MSB 40NG-046/2, dated July 22, 2016. If the initial inspection was done before November 29, 2016 (the effective date of this AD), then the report for this inspection is required within 10 days after November 29, 2016 (the effective date of this AD).

(5) At the following compliance times, installing a V-clamp P/N E4A-41-000-002 is prohibited.

(i) Anytime a P/N E4A-41-000-002 V-clamp is replaced with an improved P/N D44-9081-126-03 V-clamp, as required by paragraphs (f)(2) and (3) of this AD; and

(ii) As of November 29, 2016 (the effective date of this AD), if a P/N E4A-41-000-002 V-clamp is not currently installed.

(g) Other FAA AD Provisions

The following provisions also apply to this AD:

(1) Alternative Methods of Compliance (AMOCs): The Manager, Standards Office, FAA, has the authority to approve AMOCs for this AD, if requested using the procedures found in 14 CFR 39.19. Send information to ATTN: Mike Kiesov, Aerospace Engineer, FAA, Small Airplane Directorate, 901 Locust, Room 301, Kansas City, Missouri 64106; telephone: (816) 329-4144; fax: (816) 329-4090; email: mike.kiesov@faa.gov. Before using any approved AMOC on any airplane to which the AMOC applies, notify your appropriate principal inspector (PI) in the FAA Flight Standards District Office (FSDO), or lacking a PI, your local FSDO.

(2) Airworthy Product: For any requirement in this AD to obtain corrective actions from a manufacturer or other source, use these actions if they are FAA-approved. Corrective actions are considered FAA-approved if they are approved by the State of Design Authority (or their delegated agent). You are required to assure the product is airworthy before it is returned to service.

(3) Reporting Requirements: For any reporting requirement in this AD, a federal agency may not conduct or sponsor, and a person is not required to respond to, nor shall a person be subject to a penalty for failure to comply with a collection of information subject to the requirements of the Paperwork Reduction Act unless that collection of information displays a current valid OMB Control Number. The OMB Control Number for this information collection is 2120-0056. Public reporting for this collection of information is estimated to be approximately 5 minutes per response, including the time for reviewing instructions, completing and reviewing the collection of information. All responses to this collection of information are mandatory. Comments concerning the accuracy of this burden and suggestions for reducing the burden should be directed to the FAA at: 800 Independence Ave. SW., Washington, DC 20591, Attn: Information Collection Clearance Officer, AES-200.

(h) Related Information

Refer to MCAI European Aviation Safety Agency (EASA) AD No. 2016-0203, dated October 10, 2016, and Diamond Aircraft Temporary Revision AMM-TR-MÄM 40-853/b, dated July 15, 2016, for related information. You may examine the MCAI on the Internet at <http://www.regulations.gov> by searching for and locating Docket No. FAA-2016-9369.

(i) Material Incorporated by Reference

(1) The Director of the Federal Register approved the incorporation by reference (IBR) of the service information listed in this paragraph under 5 U.S.C. 552(a) and 1 CFR part 51.

(2) You must use this service information as applicable to do the actions required by this AD, unless this AD specifies otherwise.

(i) Diamond Aircraft Industries GmbH Mandatory Service Bulletin MSB 40NG-046/2, dated July 22, 2016.

(ii) Diamond Aircraft Industries GmbH Work Instruction WI-MSB 40NG-046, dated July 14, 2016.

(3) For Diamond Aircraft Industries GmbH service information identified in this AD, contact Diamond Aircraft Industries GmbH, N.A. Otto-Straße 5, A-2700 Wiener Neustadt, Austria, telephone: +43 2622 26700; fax: +43 2622 26780; email: office@diamond-air.at; Internet: <http://www.diamondaircraft.com>.

(4) You may view this service information at the FAA, Small Airplane Directorate, 901 Locust, Kansas City, Missouri 64106. For information on the availability of this material at the FAA, call (816) 329-4148. It is also available on the Internet at <http://www.regulations.gov> by searching for locating Docket No. FAA-2016-9369.

(5) You may view this service information that is incorporated by reference at the National Archives and Records Administration (NARA). For information on the availability of this material at NARA, call 202-741-6030, or go to: <http://www.archives.gov/federal-register/cfr/ibr-locations.html>.

Issued in Kansas City, Missouri, on October 31, 2016.

Pat Mullen,
Acting Manager, Small Airplane Directorate,
Aircraft Certification Service.