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DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

14 CFR Part 39

[Docket No. FAA-2011-0231; Directorate Identifier 2011-CE-003-AD; Amendment 39-16706; AD 2011-11-07]

RIN 2120-AA64

Airworthiness Directives; Diamond Aircraft Industries GmbH Model DA 42 Airplanes

AGENCY: Federal Aviation Administration (FAA), Department of Transportation (DOT).

ACTION: Final rule.

SUMMARY: We are adopting a new airworthiness directive (AD) for the products listed above. This AD results from mandatory continuing airworthiness information (MCAI) issued by an aviation authority of another country to identify and correct an unsafe condition on an aviation product. The MCAI describes the unsafe condition as:

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 aluminum, is susceptible to cracking.

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.

We are issuing this AD to require actions to correct the unsafe condition on these products.

DATES: This AD becomes effective July 6, 2011.

On July 6, 2011, the Director of the Federal Register approved the incorporation by reference of certain publications listed in this AD.

ADDRESSES: You may examine the AD docket on the Internet at <http://www.regulations.gov> or in person at Document Management Facility, U.S. Department of Transportation, Docket Operations, M-30, West Building Ground Floor, Room W12-140, 1200 New Jersey Avenue, SE., Washington, DC 20590.

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; e-mail: office@diamond-air.at; Internet: <http://www.diamond-air.at>. You may review copies of the 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.

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.

SUPPLEMENTARY INFORMATION:

Discussion

We issued a notice of proposed rulemaking (NPRM) to amend 14 CFR part 39 to include an AD that would apply to the specified products. That NPRM was published in the Federal Register on March 16, 2011 (76 FR 14346). That NPRM proposed to correct an unsafe condition for the specified products. The MCAI states:

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 aluminum, is susceptible to cracking.

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.

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.

For the reasons described above, this new AD retains the requirements of EASA AD 2010-0155R1, which is superseded, and adds the terminating action requirement to modify the aeroplane by installing the improved steel part. This new AD also prohibits re-installation of the aluminum part.

Comments

We gave the public the opportunity to participate in developing this AD. We received no comments on the NPRM or on the determination of the cost to the public.

Conclusion

We reviewed the available data and determined that air safety and the public interest require adopting the AD as proposed.

Differences Between This AD and the MCAI or Service Information

We have reviewed the MCAI and related service information and, in general, agree with their substance. But we might have found it necessary to use different words from those in the MCAI to ensure the AD is clear for U.S. operators and is enforceable. In making these changes, we do not intend to differ substantively from the information provided in the MCAI and related service information.

We might also have required different actions in this AD from those in the MCAI in order to follow FAA policies. Any such differences are highlighted in a note within the AD.

Costs of Compliance

We estimate that this AD will affect 162 products of U.S. registry. We also estimate that it would take about 1 work-hour per product to comply with the basic requirements of this AD. The average labor rate is \$85 per work-hour. Required parts would cost about \$729 per product.

Based on these figures, we estimate the cost of this AD on U.S. operators to be \$131,868, or \$814 per product.

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 this AD:

- (1) Is not a "significant regulatory action" under Executive Order 12866;
- (2) Is not a "significant rule" under DOT Regulatory Policies and Procedures (44 FR 11034, February 26, 1979); and
- (3) 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.

We prepared a regulatory evaluation of the estimated costs to comply with this AD and placed it in the AD Docket.

Examining the AD Docket

You may examine the AD docket on the Internet at <http://www.regulations.gov>; 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 the NPRM, 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.

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:



2011-11-07 Diamond Aircraft Industries GmbH: Amendment 39-16706; Docket No. FAA-2011-0231; Directorate Identifier 2011-CE-003-AD.

Effective Date

- (a) This airworthiness directive (AD) becomes effective July 6, 2011.

Affected ADs

- (b) None.

Applicability

(c) This AD applies to Diamond Aircraft Industries GmbH Model DA 42 airplanes, all serial numbers, certificated in any category.

Subject

- (d) Air Transport Association of America (ATA) Code 32: Landing Gear.

Reason

- (e) The mandatory continuing airworthiness information (MCAI) states:

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 aluminum, is susceptible to cracking.

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.

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.

For the reasons described above, this new AD retains the requirements of EASA AD 2010-0155R1, which is superseded, and adds the terminating action requirement to modify the aeroplane by installing the improved steel part. This new AD also prohibits re-installation of the aluminum part.

Actions and Compliance

(f) Unless already done, do the following actions following Diamond Aircraft Industries GmbH Mandatory Service Bulletin No. MSB 42-088/2, dated February 3, 2011; and Work Instruction WI-MSB 42-088, dated February 3, 2011:

(1) For airplanes installed with main landing gear (MLG) joint P/N D60-3217-23-5x: Within 100 hours time-in-service (TIS) after the effective date of this AD, replace each MLG joint P/N D60-3217-23-5x with a MLG joint P/N D64-3217-23-0x.

(2) For all airplanes: As of the effective date of this AD, do not install MLG joint P/N D60-3217-23-5x.

FAA AD Differences

Note: This AD differs from the MCAI and/or service information as follows: EASA originally established an initial and repetitive inspection of the MLG joint part. We are not establishing an initial or repetitive inspection, and instead we are just requiring a mandatory one-time replacement of the part within 100 hours TIS after the effective date of this AD.

Other FAA AD Provisions

(g) 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. 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.

Related Information

(h) Refer to MCAI EASA AD No.: 2011-0020, dated February 7, 2011; Diamond Aircraft Industries GmbH Mandatory Service Bulletin No. MSB 42-088/2, dated February 3, 2011; and Work Instruction WI-MSB 42-088, dated February 3, 2011, for related information. For service information related to 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; e-mail: office@diamond-air.at; Internet: <http://www.diamond-air.at>. You may review copies of the 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.

Material Incorporated by Reference

(i) You must use Diamond Aircraft Industries GmbH Mandatory Service Bulletin No. MSB 42-088/2, dated February 3, 2011; and Work Instruction WI-MSB 42-088, dated February 3, 2011, to do the actions required by this AD, unless the AD specifies otherwise.

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

(2) 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; e-mail: office@diamond-air.at; Internet: <http://www.diamond-air.at>.

(3) You may review copies of the 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.

(4) You may also review copies of the service information incorporated by reference for this AD 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/code_of_federal_regulations/ibr_locations.html.

Issued in Kansas City, Missouri, on May 18, 2011.

Earl Lawrence,
Manager, Small Airplane Directorate,
Aircraft Certification Service.