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## **DEPARTMENT OF TRANSPORTATION**

### **Federal Aviation Administration**

#### **14 CFR Part 39**

**[Docket No. FAA-2007-27533 Directorate Identifier 2007-CE-022-AD; Amendment 39-15102; AD 2007-12-24]**

**RIN 2120-AA64**

#### **Airworthiness Directives; Diamond Aircraft Industries Model DA 42 Airplanes**

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

**ACTION:** Final rule.

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**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:

Shortly after an engine change, the aluminium fitting attached to the engine gearbox holding lines and fittings of the propeller control system was found to be cracked. This led to a pressure loss in the propeller control system following a control system malfunction and led to an in-flight engine shutdown.

The broken fitting is part of the engine installation and was initially a steel part. It was later modified by the engine manufacturer to an aluminium design.

Investigation determined that the area is critical for cracks due to combination of mass, material and installation torque values.

Diamond Aircraft Industries incorporated with Design Change MÄM 42-184 an additional bracket into production airplanes to improve the installations and prevent vibration cracks.

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

**DATES:** This AD becomes effective July 19, 2007.

On July 19, 2007, 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://dms.dot.gov> or in person at the 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 FURTHER INFORMATION CONTACT:** Sarjapur Nagarajan, Aerospace Engineer, FAA, Small Airplane Directorate, 901 Locust, Room 301, Kansas City, Missouri 64106; telephone: (816) 329-4145; fax: (816) 329-4090.

## **SUPPLEMENTARY INFORMATION:**

### **Streamlined Issuance of AD**

The FAA is implementing a new process for streamlining the issuance of ADs related to MCAI. The streamlined process will allow us to adopt MCAI safety requirements in a more efficient manner and will reduce safety risks to the public. This process continues to follow all FAA AD issuance processes to meet legal, economic, Administrative Procedure Act, and Federal Register requirements. We also continue to meet our technical decision-making responsibilities to identify and correct unsafe conditions on U.S.-certificated products.

This AD references the MCAI and related service information that we considered in forming the engineering basis to correct the unsafe condition. The AD contains text copied from the MCAI and for this reason might not follow our plain language principles.

### **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 April 13, 2007 (72 FR 18598). That NPRM proposed to correct an unsafe condition for the specified products. The MCAI states that:

Shortly after an engine change, the aluminium fitting attached to the engine gearbox holding lines and fittings of the propeller control system was found to be cracked. This led to a pressure loss in the propeller control system following a control system malfunction and led to a in-flight engine shutdown.

The broken fitting is part of the engine installation and was initially a steel part. It was later modified by the engine manufacturer to an aluminium design.

Investigation determined that the area is critical for cracks due to combination of mass, material and installation torque values.

Diamond Aircraft Industries incorporated with Design Change MÄM 42-184 an additional bracket into production airplanes to improve the installations and prevent vibration cracks.

This airworthiness directive requires the retroactive installation of this bracket for all airplanes, including the airplanes with steel fittings.

## **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 70 products of U.S. registry. We also estimate that it will take about 1.0 work-hour per product to comply with basic requirements of this AD. The average labor rate is \$80 per work-hour. Required parts will cost about \$208 per product. Where the service information lists required parts costs that are covered under warranty, we have assumed that there will be no charge for these parts. As we do not control warranty coverage for affected parties, some parties may incur costs higher than estimated here.

Based on these figures, we estimate the cost of this AD to the U.S. operators to be \$20,160 or \$288 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://dms.dot.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:



**2007-12-24 Diamond Aircraft Industries:** Amendment 39-15102; Docket No. FAA-2007-27533; Directorate Identifier 2007-CE-022-AD.

**Effective Date**

- (a) This airworthiness directive (AD) becomes effective July 19, 2007.

**Affected ADs**

- (b) None.

**Applicability**

- (c) This AD applies to DA 42 airplanes, serial numbers 42.004 through 42.129, 42.177, and 42.AC001, certificated in any category.

**Subject**

- (d) Air Transport Association of America (ATA) Code 72: Engine.

**Reason**

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

Shortly after an engine change, the aluminium fitting attached to the engine gearbox holding lines and fittings of the propeller control system was found to be cracked. This led to a pressure loss in the propeller control system following a control system malfunction and led to an in-flight engine shutdown.

The broken fitting is part of the engine installation and was initially a steel part. It was later modified by the engine manufacturer to an aluminium design.

Investigation determined that the area is critical for cracks due to combination of mass, material and installation torque values.

Diamond Aircraft Industries incorporated with Design Change MÄM 42-184 an additional bracket into production airplanes to improve the installations and prevent vibration cracks.

This airworthiness directive requires the retroactive installation of this bracket for all airplanes, including the airplanes with steel fittings.

## **Actions and Compliance**

(f) Unless already done, within the next 50 hours time-in-service after July 19, 2007 (the effective date of this AD) or within the next 30 days after July 19, 2007 (the effective date of this AD), whichever occurs first, install the additional steel bracket following Diamond Aircraft Industries GmbH Mandatory Service Bulletin NO. MSB-42-024/3, dated September 19, 2006, which references Diamond Aircraft Industries GmbH Work Instruction WI-MSB-42-024, Revision 2, dated September 19, 2006.

**Note 1:** If the above action was accomplished following the procedures described in Diamond Aircraft Industries GmbH Mandatory Service Bulletin No. MSB-42-024/2, dated August 31, 2006, you may take "unless already done" credit, and no further action per this AD is necessary.

## **FAA AD Differences**

**Note 2:** This AD differs from the MCAI and/or service information as follows: No differences.

## **Other FAA AD Provisions**

(g) The following provisions also apply to this AD:

(1) Alternative Methods of Compliance (AMOCs): The Manager, Standards Staff, FAA, ATTN: Sarjapur Nagarajan, Aerospace Engineer, FAA, Small Airplane Directorate, 901 Locust, Room 301, Kansas City, Missouri 64106; telephone: (816) 329-4145; fax: (816) 329-4090, has the authority to approve AMOCs for this AD, if requested using the procedures found in 14 CFR 39.19. 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, under the provisions of the Paperwork Reduction Act (44 U.S.C. 3501 et seq.), the Office of Management and Budget (OMB) has approved the information collection requirements and has assigned OMB Control Number 2120-0056.

## **Related Information**

(h) Refer to MCAI European Aviation Safety Agency (EASA) AD No: 2006-0277, dated September 06, 2006; and Diamond Aircraft Industries GmbH, Mandatory Service Bulletin No. MSB-42-024/3, dated September 19, 2006, which references Diamond Aircraft Industries GmbH Work Instruction WI-MSB-42-024, Revision 2, dated September 19, 2006, for related information.

## **Material Incorporated by Reference**

(i) You must use Diamond Aircraft Industries GmbH, Mandatory Service Bulletin No. MSB-42-024/3, dated September 19, 2006, which references Diamond Aircraft Industries GmbH Work Instruction WI-MSB-42-024, Revision 2, dated September 19, 2006, 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-Strabe 5, A-2700 Wiener Neustadt; Fax: \*\*43-2622-26620; or e-mail: support@diamond-air.at.

(3) You may review copies at the FAA, Central Region, Office of the Regional Counsel, 901 Locust, Room 506, Kansas City, Missouri 64106; or 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 June 6, 2007.

James E. Jackson,

Acting Manager, Small Airplane Directorate, Aircraft Certification Service.

[FR Doc. E7-11287 Filed 6-13-07; 8:45 am]