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## **DEPARTMENT OF TRANSPORTATION**

### **Federal Aviation Administration**

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

**[Docket No. FAA-2008-0991 Directorate Identifier 2008-CE-054-AD; Amendment 39-15729; AD 2008-23-08]**

**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.

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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:

In-service experience indicates that the powder coating of the rear right hand (RH) engine support bracket degrades over time, leading to a reduced torque of the engine mountings bolts. In some cases, bolts had fully unscrewed and fell into the engine cowling. One case was reported where the pilot had to shut down an engine in flight because of a failed V-belt, the cause of failure assumed to be one of these bolts. This condition, if not corrected, may lead to further cases of loose bolts and subsequent damage to the engine or accessories in the engine compartment, possibly resulting in in-flight engine shut-down and reduced control of the aircraft.

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

**DATES:** This AD becomes effective December 22, 2008.

On December 22, 2008, 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 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:**

### **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 September 17, 2008 (73 FR 53766). That NPRM proposed to correct an unsafe condition for the specified products. The MCAI states:

In-service experience indicates that the powder coating of the rear right hand (RH) engine support bracket degrades over time, leading to a reduced torque of the engine mountings bolts. In some cases, bolts had fully unscrewed and fell into the engine cowling. One case was reported where the pilot had to shut down an engine in flight because of a failed V-belt, the cause of failure assumed to be one of these bolts. This condition, if not corrected, may lead to further cases of loose bolts and subsequent damage to the engine or accessories in the engine compartment, possibly resulting in in-flight engine shut-down and reduced control of the aircraft.

To address and correct this situation, DAI has published MSB-42-058, providing instructions to accomplish repetitive inspections and correction of the fastening torque of the affected engine mounting bolts and replacement of the bolts with wire-secured bolts Part Number (P/N) D60-9071-26-01, after which the repetitive torque checks are no longer required.

### **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**

Based on the service information, we estimate that this AD will affect 157 products of U.S. registry. We also estimate that it will take about 1.5 work-hours per product to comply with basic

requirements of this AD. The average labor rate is \$80 per work-hour. Required parts will cost about \$0 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 \$18,840 or \$120 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:



**2008-23-08 Diamond Aircraft Industries GmbH:** Amendment 39-15729; Docket No. FAA-2008-0991; Directorate Identifier 2008-CE-054-AD.

**Effective Date**

- (a) This airworthiness directive (AD) becomes effective December 22, 2008.

**Affected ADs**

- (b) None.

**Applicability**

(c) This AD applies to Model DA 42 airplanes, all serial numbers, certificated in any category, that have Thielert TAE125-01 engines installed, except those airplanes with engines identified by serial number in Diamond Aircraft Industries GmbH Mandatory Service Bulletin No. MSB-42-058, dated May 21, 2008, that have been installed on the aircraft with wedge locking washers and bonded-in bolts and are therefore not affected by this AD.

**Subject**

- (d) Air Transport Association of America (ATA) Code 71: Power Plant.

**Reason**

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

In-service experience indicates that the powder coating of the rear right hand (RH) engine support bracket degrades over time, leading to a reduced torque of the engine mountings bolts. In some cases, bolts had fully unscrewed and fell into the engine cowling. One case was reported where the pilot had to shut down an engine in flight because of a failed V-belt, the cause of failure assumed to be one of these bolts. This condition, if not corrected, may lead to further cases of loose bolts and subsequent damage to the engine or accessories in the engine compartment, possibly resulting in in-flight engine shut-down and reduced control of the aircraft.

To address and correct this situation, DAI has published MSB-42-058, providing instructions to accomplish repetitive inspections and correction of the fastening torque of the affected engine mounting bolts and replacement of the bolts with wire-secured bolts Part Number (P/N) D60-9071-26-01, after which the repetitive torque checks are no longer required.

For the reasons described above, this EASA AD requires the accomplishment of repetitive torque checks of the affected engine mounting bolts and replacement of the bolts with wire-secured bolts.

## **Actions and Compliance**

(f) Unless already done, do the following actions:

(1) Within the next 100 hours time-in-service (TIS) after December 22, 2008 (the effective date of this AD) and repetitively thereafter at intervals not to exceed 100 hours TIS, do the inspection and correction of the fastening torque of the RH rear engine support bracket mounting bolts following Diamond Aircraft Industries GmbH Mandatory Service Bulletin No. MSB-42-058, dated May 21, 2008; and Action 1 of Diamond Aircraft Industries GmbH Work Instruction WI-MSB-42-058, dated March 12, 2008.

(2) Within 6 months after December 22, 2008 (the effective date of this AD), replace all RH rear engine support bracket mounting bolts with wire-secured bolts, P/N D60-9071-26-01, following Diamond Aircraft Industries GmbH Mandatory Service Bulletin No. MSB-42-058, dated May 21, 2008; and Action 2 of Diamond Aircraft Industries GmbH Work Instruction WI-MSB-42-058, dated March 12, 2008.

(3) Installation of the wire-secured bolts, P/N D60-9071-26-01, as required by paragraph (f)(2) of this AD, terminates the repetitive torque inspections required by paragraph (f)(1) of this AD.

(4) As of 6 months after December 22, 2008 (the effective date of this AD), no person shall install spare RH rear engine support bracket mounting bolts as replacement parts on any aircraft to which this AD applies, except P/N D60-9071-26-01 wire-secured bolts.

## **FAA AD Differences**

Note: 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 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: Sarjapur Nagarajan, Aerospace Engineer, FAA, Small Airplane Directorate, 901 Locust, Room 301, Kansas City, Missouri 64106; telephone: (816) 329-4145; 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, 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. 2008-0139, dated July 24, 2008; Diamond Aircraft Industries GmbH Mandatory Service Bulletin No. MSB-42-058, dated

May 21, 2008; and Diamond Aircraft Industries GmbH Work Instruction WI-MSB-42-058, dated March 12, 2008, for related information.

### **Material Incorporated by Reference**

(i) You must use Diamond Aircraft Industries GmbH Mandatory Service Bulletin No. MSB-42-058, dated May 21, 2008; and Diamond Aircraft Industries GmbH Work Instruction WI-MSB-42-058, dated March 12, 2008, 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; telephone: +43 2622 26700; fax: +43 2622 26780; e-mail: [office@diamond-air.at](mailto:office@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 October 29, 2008.

James E. Jackson,  
Acting Manager, Small Airplane Directorate,  
Aircraft Certification Service.