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DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

14 CFR Part 39

[Docket No. FAA-2007-27348; Directorate Identifier 2007-CE-015-AD; Amendment 39-15078; AD 2007-11-21]

RIN 2120-AA64

Airworthiness Directives; Diamond Aircraft Industries GmbH Model DA 40 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:

Abnormal manufacturing variations of the universal joints in combination with mechanical wear can lead to a joint failure and subsequent disconnection between selector and the fuel valve. This result in a loss of capability to select the fuel tank for supply. This condition might remain unrecognised by the pilot and can result in fuel starvation during flight and/or unavailability of emergency fuel shutoff.

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

DATES: This AD becomes effective July 9, 2007.

On July 9, 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 Docket Management Facility, U.S. Department of Transportation, 400 Seventh Street, SW., Nassif Building, Room PL-401, Washington, DC.

FOR FURTHER INFORMATION CONTACT: Mr. 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 2, 2007 (72 FR 15633). That NPRM proposed to correct an unsafe condition for the specified products. The MCAI states:

Abnormal manufacturing variations of the universal joints in combination with mechanical wear can lead to a joint failure and subsequent disconnection between selector and the fuel valve. This result in a loss of capability to select the fuel tank for supply. This condition might remain unrecognized by the pilot and can result in fuel starvation during flight and/or unavailability of emergency fuel shutoff.

Revision History

This inspection was initially addressed by Austrian AD A-2004-003. The design of the fuel selector/fuel valve universal joint has than been changed by design change MÄM 40-142/a and was introduced into serial production. The initial repetitive AD inspection interval of 50 Hrs is also applicable for this design. The investigation of the inspections carried out, has identified that the new joint design eliminated the design problem and no additional inspection is required.

You may obtain further information by examining the MCAI in the AD docket.

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 476 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.

Based on these figures, we estimate the cost of this AD to the U.S. operators to be \$57,120, or \$120 per product.

In addition, we estimate that any necessary follow-on actions will take about 2.5 work-hours and require parts costing \$382, for a cost of \$582 per product. We have no way of determining the number of products that may need these actions.

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) 647-5227) 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:



2007-11-21 Diamond Aircraft Industries GmbH: Amendment 39-15078; Docket No. FAA-2007-27348; Directorate Identifier 2007-CE-015-AD.

Effective Date

- (a) This airworthiness directive (AD) becomes effective July 9, 2007.

Affected ADs

- (b) None.

Applicability

- (c) This AD applies to Model DA 40 airplanes, serial numbers 40.006 up to and including 40.079, 40.081 up to and including 40.083, 40.201 up to and including 40.417, that:
 - (1) Are certificated in any category; and
 - (2) have fuel shaft part number D41-2823-20-00 Rev “-” installed.

Subject

- (d) Air Transport Association of America (ATA) Code 28: Fuel.

Reason

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

Abnormal manufacturing variations of the universal joints in combination with mechanical wear can lead to a joint failure and subsequent disconnection between selector and the fuel valve. This results in a loss of capability to select the fuel tank for supply. This condition might remain unrecognized by the pilot and can result in fuel starvation during flight and/or unavailability of emergency fuel shutoff.

Revision History

This inspection was initially addressed by Austrian AD A-2004-003. The design of the fuel selector/fuel valve universal joint has than been changed by design change MÄM 40-142/a and was introduced into serial production. The initial repetitive AD inspection interval of 50 Hrs is also applicable for this design. The investigation of the inspections carried out, has identified that the new joint design eliminated the design problem and no additional inspection is required.

Actions and Compliance

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

(1) When the airplane reaches a total of 200 hours time-in-service (TIS) or within the next 15 hours TIS after July 9, 2007 (the effective date of this AD), whichever occurs later, inspect the universal joint in accordance with Diamond Aircraft Industries GmbH Mandatory Service Bulletin No. MSB 40-030/3, dated January 31, 2006. Repetitively inspect thereafter at intervals not to exceed 50 hours TIS until the modified universal joint assembly specified in paragraph (f)(2) of this AD is installed.

(2) Before further flight, replace the complete joint assembly with the new joint assembly, part number (P/N) D41-2823-20-00 rev "a" or higher in accordance with Diamond Aircraft Industries GmbH Mandatory Service Bulletin No. MSB 40-030/3, dated January 31, 2006, if one or more defects are found on the universal joint during any inspection required by this AD.

(3) The 50-hour TIS repetitive inspection requirement in paragraph (f)(1) of this AD is terminated when the universal joint has been replaced with the new universal joint assembly, P/N D41-2823-20-00 rev "a" or higher, as specified in paragraph (f)(2) of this AD.

(4) At 1,000-hour TIS intervals after the replacement specified in paragraph (f)(2) of this AD, inspect the universal joints in the fuel selector shaft as specified in Diamond Aircraft DA 40 Series Temporary Revision to the Airplane Maintenance Manual (AMM), AMM-TR-MÄM-40-142/a, Fuel Tank Selector, Doc. No. 6.02.01, Section 25-20-00, page 28a, dated May 23, 2005.

FAA AD Differences

Note: This AD differs from the MCAI and/or service information as follows: The MCAI incorporates the repetitive inspection requirement for the new joint assembly, P/N D41-2823-20-00 rev "a" or higher, into the AMM. In order for this inspection to be required for U.S.-owner/operators, we are incorporating the 1,000-hour repetitive inspection into this AD.

Other FAA AD Provisions

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

(1) Alternative Methods of Compliance (AMOCs): The Manager, Standards Staff, FAA, Small Airplane Directorate, ATTN: Sarjapur Nagarajan, Aerospace Engineer, 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. 2006-0067, dated March 24, 2006; and Diamond Aircraft Industries GmbH Mandatory Service Bulletin No. MSB 40-030/3, dated January 31, 2006, for related information.

Material Incorporated by Reference

(i) You must use Diamond Aircraft Industries GmbH Mandatory Service Bulletin No. MSB 40-030/3, dated January 31, 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-Straße 5, A-2700 Wiener Neustadt; telephone: +43 2622 26700; fax: +43 2622 26780; e-mail: 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 May 25, 2007.

Kim Smith,
Manager, Small Airplane Directorate, Aircraft Certification Service.
[FR Doc. E7-10589 Filed 6-1-07; 8:45 am]