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DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

14 CFR Part 39

[Docket No. FAA-2009-0125 Directorate Identifier 2009-CE-002-AD; Amendment 39-15873; AD 2009-07-14]

RIN 2120-AA64

Airworthiness Directives; Diamond Aircraft Industries GmbH Model DA 40 and DA 40F 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:

A number of wings manufactured by Diamond Aircraft Industries Inc. in Canada have been found to exhibit voids in the adhesive joint between the main spar caps and the upper wing skins. The available information indicates that wings with voids continue to meet the certification design limits, provided the voids are within established criteria. However, to detect any wings that may have voids exceeding these criteria, Diamond has issued Mandatory Service Bulletin MSB-40-060 and MSB-F4-016 (single document) that describes instructions for inspection of the aircraft that had these wings installed during manufacture. Aircraft that have voids within the inspection criteria may continue to operate without restriction, pending the outcome of ongoing investigations. Aircraft that have voids exceeding the inspection criteria must be repaired.

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

DATES: This AD becomes effective May 11, 2009.

On May 11, 2009, 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 February 13, 2009 (74 FR 7196). That NPRM proposed to correct an unsafe condition for the specified products. The MCAI states:

A number of wings manufactured by Diamond Aircraft Industries Inc. in Canada have been found to exhibit voids in the adhesive joint between the main spar caps and the upper wing skins. The available information indicates that wings with voids continue to meet the certification design limits, provided the voids are within established criteria. However, to detect any wings that may have voids exceeding these criteria, Diamond has issued Mandatory Service Bulletin MSB-40-060 and MSB-F4-016 (single document) that describes instructions for inspection of the aircraft that had these wings installed during manufacture. Aircraft that have voids within the inspection criteria may continue to operate without restriction, pending the outcome of ongoing investigations. Aircraft that have voids exceeding the inspection criteria must be repaired.

For the reasons described above, this EASA AD requires the inspection of the affected aircraft to measure the voids in the adhesive joint between the main spar caps and the upper wing skin, the reporting of all findings to Diamond Aircraft industries and the repair of any voids exceeding the criteria as specified in the MSB.

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 649 products of U.S. registry. We also estimate that it will take about 2 work-hours per product to comply with the 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 \$103,840 or \$160 per product.

We have no way of determining the cost of any necessary repairs or parts that may be required as a result of any proposed inspection.

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:



2009-07-14 Diamond Aircraft Industries GmbH: Amendment 39-15873; Docket No. FAA-2009-0125; Directorate Identifier 2009-CE-002-AD.

Effective Date

- (a) This airworthiness directive (AD) becomes effective May 11, 2009.

Affected ADs

- (b) None.

Applicability

(c) This AD applies to the following model and serial number airplanes, certificated in any category: DA 40 airplanes, serial numbers 40.377, 40.420, 40.422, 40.644 through 40.693, 40.695 through 40.842, 40.844, 40.846 through 40.887, 40.889 through 40.912, 40.915 through 40.917, 40.919 through 40.929, 40.931, 40.932, 40.934 through 40.940, 40.944 through 40.949, 40.951 through 40.953, 40.955 through 40.957, 40.961, 40.964, and 40.971; and DA 40F airplanes, serial numbers 40.FC007 through 40.FC029.

Subject

- (d) Air Transport Association of America (ATA) Code 57: Wings.

Reason

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

A number of wings manufactured by Diamond Aircraft Industries Inc. in Canada have been found to exhibit voids in the adhesive joint between the main spar caps and the upper wing skins. The available information indicates that wings with voids continue to meet the certification design limits, provided the voids are within established criteria. However, to detect any wings that may have voids exceeding these criteria, Diamond has issued Mandatory Service Bulletin MSB-40-060 and MSB-F4-016 (single document) that describes instructions for inspection of the aircraft that had these wings installed during manufacture. Aircraft that have voids within the inspection criteria may continue to operate without restriction, pending the outcome of ongoing investigations. Aircraft that have voids exceeding the inspection criteria must be repaired.

For the reasons described above, this EASA AD requires the inspection of the affected aircraft to measure the voids in the adhesive joint between the main spar caps and the upper wing skin, the reporting of all findings to Diamond Aircraft industries and the repair of any voids exceeding the criteria as specified in the MSB.

Actions and Compliance

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

(1) Within the next 100 hours time-in-service (TIS) after May 11, 2009 (the effective date of this AD) or within the next 3 months after May 11, 2009 (the effective date of this AD), whichever occurs first, inspect the adhesive joint between the wing main spar caps and the upper wing skin for adhesive voids following Diamond Aircraft Industries GmbH Work Instructions WI-MSB-40-060 and WI-MSB-F4-016 (single document), dated October 20, 2008; as referenced in Diamond Aircraft Industries GmbH Mandatory Service Bulletins No. MSB-40-060 and No. MSB-F4-016 (single document), dated October 20, 2008.

(2) Within the next 30 days after the inspection required in paragraph (f)(1) of this AD or within 30 days after May 11, 2009 (the effective date of this AD), whichever occurs later, report the results to Diamond Aircraft Industries following Diamond Aircraft Industries GmbH Work Instructions WI-MSB-40-060 and WI-MSB-F4-016 (single document), dated October 20, 2008; as referenced in Diamond Aircraft Industries GmbH Mandatory Service Bulletins No. MSB-40-060 and No. MSB-F4-016 (single document), dated October 20, 2008.

(3) If, as a result of the inspection required by paragraph (f)(1) of this AD, an adhesive void is found that exceeds the criteria specified in the service information, before further flight, contact Diamond Aircraft Industries at 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, for FAA-approved repair instructions and accomplish the repair accordingly.

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.: 2008-0224, dated December 16, 2008; and Diamond Aircraft Industries GmbH Mandatory Service Bulletins No. MSB-40-060 and No. MSB-F4-016 (single document), dated October 20, 2008, for related information.

Material Incorporated by Reference

(i) You must use Diamond Aircraft Industries GmbH Work Instructions WI-MSB-40-060 and WI-MSB-F4-016 (single document), dated October 20, 2008; and Diamond Aircraft Industries GmbH Mandatory Service Bulletins No. MSB-40-060 and No. MSB-F4-016 (single document), dated October 20, 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; Internet: <http://www.diamond-air.at/>.

(3) You may review copies of the service information incorporated by reference for this AD at the FAA, Central Region, Office of the Regional Counsel, 901 Locust, Kansas City, Missouri 64106. For information on the availability of this material at the Central Region, call (816) 329-3768.

(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 March 27, 2009.

John R. Colomy,
Acting Manager, Small Airplane Directorate,
Aircraft Certification Service.