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DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

14 CFR Part 39

[Docket No. FAA-2014-0226; Directorate Identifier 2014-CE-009-AD; Amendment 39-17884; AD 2014-13-08]

RIN 2120-AA64

Airworthiness Directives; Diamond Aircraft Industries GmbH Airplanes

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

ACTION: Final rule.

SUMMARY: We are superseding Airworthiness Directive (AD) 2013-24-14 for Diamond Aircraft Industries GmbH Models DA40 and DA40F airplanes. 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 the fatigue strength found in the aft main spar not ensuring unlimited lifetime structural integrity. We are issuing this AD to require actions to address the unsafe condition on these products.

DATES: This AD is effective August 27, 2014.

The Director of the Federal Register approved the incorporation by reference of a certain publication listed in the AD as of August 27, 2014.

The Director of the Federal Register approved the incorporation by reference of certain other publications listed in this AD as of January 7, 2014 (78 FR 72568; December 3, 2013).

ADDRESSES: You may examine the AD docket on the Internet at <http://www.regulations.gov> by searching for and locating Docket No. FAA-2014-0226; or in person at the Docket 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-Str.5, A-2700 Wiener Neustadt, Austria; telephone: +43 2622 26700; fax: +43 2622 26780; email: office@diamond-air.at; Internet: <http://www.diamondaircraft.com/contact/technical.php>. You may view this 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; email: mike.kiesov@faa.gov.

SUPPLEMENTARY INFORMATION:

Discussion

We issued a notice of proposed rulemaking (NPRM) to amend 14 CFR part 39 to add an AD that would apply to Diamond Aircraft Industries GmbH Model DA 40 airplanes. That NPRM was published in the Federal Register on April 14, 2014 (79 FR 20827), and proposed to supersede AD 2013-24-14, Amendment 39-17689 (78 FR 72568; December 3, 2013) ("AD 2013-24-14").

Since we issued AD 2013-24-14, the inspections required by AD 2013-24-14 are tied to calendar time and the major structural inspection (MSI) identified in Chapter 5 of the airplane maintenance manual (AMM). This compliance time mirrors the mandatory continuing airworthiness information (MCAI) issued by the State of Design for these products. However, U.S. operators are not required to comply with the requirement to inspect before the next MSI since the Limitations in Chapter 4 of the AMM are mandatory, and the MSI in Chapter 5 of the AMM is not mandatory.

The NPRM proposed to correct an unsafe condition for the specified products and was based on MCAI originated by an aviation authority of another country. The MCAI states that:

Structural fatigue testing of the DA 40 aeroplane carried out for an extension of the Major Structural Inspection (MSI) interval has shown that the fatigue strength of the aft main spar in the cabin area does not ensure unlimited lifetime.

This condition, if not corrected, could adversely affect the structural integrity of the aeroplane.

Diamond Aircraft Industries (DAI) issued Mandatory Service Bulletin (MSB) 40-074/MSB D4-094/MSB F4-028, including Work Instruction (WI) WI-MSB 40-074/WI-MSB D4-094/WI-MSB F4-028 (published as a single document), providing instructions to reinforce the aft main spar in the cabin area.

For the reasons described above, this AD requires modification of the aft main spar in the cabin area.

The MCAI can be found in the AD docket on the Internet at:
<http://www.regulations.gov/#!documentDetail;D=FAA-2014-0226-0002>.

Comments

We gave the public the opportunity to participate in developing this AD. We received no comments on the NPRM (79 FR 20827, April 14, 2014) or on the determination of the cost to the public.

Conclusion

We reviewed the relevant data and determined that air safety and the public interest require adopting the AD as proposed except for minor editorial changes. We have determined that these minor changes:

- Are consistent with the intent that was proposed in the NPRM (79 FR 20827, April 14, 2014) for correcting the unsafe condition; and

- Do not add any additional burden upon the public than was already proposed in the NPRM (79 FR 20827, April 14, 2014).

Costs of Compliance

We estimate that this AD will affect 747 products of U.S. registry. We also estimate that it will take about 6 work-hours per product to comply with the basic requirements of this AD. The average labor rate is \$85 per work-hour. Required parts will cost about \$100 per product.

Based on these figures, we estimate the cost of this AD to the U.S. operators to be \$455,670, or \$610 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 the DOT Regulatory Policies and Procedures (44 FR 11034, February 26, 1979),
- (3) Will not affect intrastate aviation in Alaska, and
- (4) 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.

Examining the AD Docket

You may examine the AD docket on the Internet at <http://www.regulations.gov> by searching for and locating Docket No. FAA-2014-0226; 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 removing Amendment 39-17689 (78 FR 72568; December 3, 2013) and adding the following new AD:



2014-13-08 Diamond Aircraft Industries GmbH: Amendment 39-17884; Docket No. FAA-2014-0226; Directorate Identifier 2014-CE-009-AD.

(a) Effective Date

This airworthiness directive (AD) becomes effective August 27, 2014.

(b) Affected ADs

This AD supersedes AD 2013-24-14, Amendment 39-17689 (78 FR 72568; December 3, 2013).

(c) Applicability

This AD applies to Diamond Aircraft Industries Model DA 40 airplanes, serial numbers 40.006 through 40.009, 40.011 through 40.1071, and 40.1073 through 40.1077; and Model DA 40 F airplanes, serial numbers 40.FC001 through 40.FC029; certificated in any category.

(d) Subject

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

(e) Reason

This AD was prompted by mandatory continuing airworthiness information (MCAI) originated 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 the fatigue strength found in the aft main spar not ensuring unlimited lifetime structural integrity. We are issuing this AD to correct an incorrect compliance time and to modify the aft main spar in the cabin area to ensure the structural integrity of the airplane.

(f) Actions and Compliance

Comply with this AD within the compliance times specified in paragraphs (f)(1) through (f)(4) of this AD, unless already done.

(1) For airplanes with less than 1,500 hours time-in-service (TIS): At or before 2,000 hours TIS after August 27, 2014 (the effective date of this AD) or within the next 114 months after August 27, 2014 (the effective date of this AD), whichever occurs first, modify the aft main spar in the cabin area following the INSTRUCTIONS section of Diamond Aircraft Industries GmbH Work Instructions WI-MSB 40-074, WI-MSB D4-094, and WI-MSB F4-028 (co-published as a single document), dated May 10, 2013, as specified in Diamond Aircraft Industries GmbH Mandatory Service Bulletins (MSB) 40-074, D4-094, and F4-028 (co-published as a single document), dated May 10, 2013.

(2) For airplanes with 1,500 hours or more than 1,500 hours TIS but less than 2,000 hours TIS: At or before 500 hours TIS after August 27, 2014 (the effective date of this AD) or within the next 114 months after August 27, 2014 (the effective date of this AD), whichever occurs first, modify the

aft main spar in the cabin area following the INSTRUCTIONS section of Diamond Aircraft Industries GmbH Work Instructions WI-MSB 40-074, WI-MSB D4-094, and WI-MSB F4-028 (co-published as a single document), dated May 10, 2013, as specified in Diamond Aircraft Industries GmbH Mandatory Service Bulletins (MSB) 40-074, D4-094, and F4-028 (co-published as a single document), dated May 10, 2013.

(3) For airplanes with 2,000 hours or more than 2,000 hours TIS but less than 2,500 hours TIS: At or before 500 hours TIS after August 27, 2014 (the effective date of this AD) or within the next 48 months after August 27, 2014 (the effective date of this AD), whichever occurs first, modify the aft main spar in the cabin area following the INSTRUCTIONS section of Diamond Aircraft Industries GmbH Work Instructions WI-MSB 40-074, WI-MSB D4-094, and WI-MSB F4-028 (co-published as a single document), dated May 10, 2013, as specified in Diamond Aircraft Industries GmbH Mandatory Service Bulletins (MSB) 40-074, D4-094, and F4-028 (co-published as a single document), dated May 10, 2013.

(4) For airplanes with 2,500 hours or more than 2,500 hours TIS: Within the next 100 hours TIS after August 27, 2014 (the effective date of this AD) or within the next 12 months after August 27, 2014 (the effective date of this AD), whichever occurs first, visually inspect the aft spar center section following page 11, Inspection Item 31 in Section 05-28-50, Maintenance Checklist Airframe, of Chapter 5, Time Limits and Maintenance Checks, in DIAMOND AIRCRAFT INDUSTRIES DA 40 SERIES AIRPLANE MAINTENANCE MANUAL (AMM), Revision 7, dated April 1, 2013. If any damage is found during this inspection, before further flight, do all necessary corrective actions.

(i) After doing the inspection required by paragraph (f)(4) of this AD including any applicable corrective actions, at or before 500 hours TIS after August 27, 2014 (the effective date of this AD) or within the next 48 months after August 27, 2014 (the effective date of this AD), whichever occurs first, modify the aft main spar in the cabin area following the INSTRUCTIONS section of Diamond Aircraft Industries GmbH Work Instructions WI-MSB 40-074, WI-MSB D4-094, and WI-MSB F4-028 (co-published as a single document), dated May 10, 2013, as specified in Diamond Aircraft Industries GmbH Mandatory Service Bulletins (MSB) 40-074, D4-094, and F4-028 (co-published as a single document), dated May 10, 2013.

(ii) The modification required in paragraph (f)(4)(i) of this AD may be done instead of the inspection required by paragraph (f)(4) of this AD provided it is done within the next 100 hours TIS after August 27, 2014 (the effective date of this AD) or within the next 12 months after August 27, 2014 (the effective date of this AD), whichever occurs first.

(g) Other FAA AD Provisions

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; email: mike.kiesov@faa.gov. 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.

(h) Related Information

Refer to MCAI European Aviation Safety Agency (EASA) AD No.: 2013-0145, dated July 15, 2013, for related information. The MCAI can be found in the AD docket on the Internet at: <http://www.regulations.gov/#!documentDetail;D=FAA-2014-0226-0002>.

(i) Material Incorporated by Reference

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

(2) You must use this service information as applicable to do the actions required by this AD, unless the AD specifies otherwise.

(3) The following service information was approved for IBR on August 27, 2014.

(i) Page 11, Inspection Item 31 in Section 05-28-50, Maintenance Checklist Airframe, of Chapter 5, Time Limits and Maintenance Checks, in DIAMOND AIRCRAFT INDUSTRIES DA 40 SERIES AIRPLANE MAINTENANCE MANUAL (AMM), Revision 7, dated April 1, 2013.

(ii) Reserved.

(4) The following service information was approved for IBR on January 7, 2014 (78 FR 72568; December 3, 2013).

(i) Diamond Aircraft Industries GmbH Mandatory Service Bulletin 40-074, dated May 10, 2013.

(ii) Diamond Aircraft Industries GmbH Mandatory Service Bulletin D4-094, dated May 10, 2013.

(iii) Diamond Aircraft Industries GmbH Mandatory Service Bulletin F4-028, dated May 10, 2013.

Note 1 to paragraphs (i)(4)(i) through (i)(4)(iii) of this AD: Diamond Aircraft Industries GmbH Mandatory Service Bulletin 40-074, dated May 10, 2013; Diamond Aircraft Industries GmbH Mandatory Service Bulletin D4-094, dated May 10, 2013; Diamond Aircraft Industries GmbH Mandatory Service Bulletin F4-028, dated May 10, 2013; are co-published as one document.

(iv) Diamond Aircraft Industries GmbH Work Instruction WI-MSB 40-074, dated May 10, 2013.

(v) Diamond Aircraft Industries GmbH Work Instruction WI-MSB D4-094, dated May 10, 2013.

(vi) Diamond Aircraft Industries GmbH Work Instruction WI-MSB F4-028, dated May 10, 2013.

Note 2 to paragraphs (i)(4)(iv) through (i)(4)(vi) of this AD: Diamond Aircraft Industries GmbH Work Instruction WI-MSB 40-074; Diamond Aircraft Industries GmbH Work Instruction WI-MSB F4-028; dated May 10, 2013; and Diamond Aircraft Industries GmbH Work Instruction WI-MSB F4-028 dated May 10, 2013; are co-published as one document.

(5) For Diamond Aircraft Industries GmbH service information identified in this AD, contact Diamond Aircraft Industries GmbH, N.A. Otto-Str.5, A-2700 Wiener Neustadt, Austria; telephone: +43 2622 26700; fax: +43 2622 26780; email: office@diamond-air.at; Internet: <http://www.diamondaircraft.com/contact/technical.php>.

(6) You may view this 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.

(7) You may view this service information that is incorporated by reference 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 24, 2014.
Timothy Smyth,
Acting Manager, Small Airplane Directorate,
Aircraft Certification Service.