

DEPARTMENT OF TRANSPORTATION**Federal Aviation Administration****14 CFR Part 39**

[Docket No. FAA-2009-1103; Directorate Identifier 2009-CE-053-AD; Amendment 39-16110; AD 2009-24-16]

RIN 2120-AA64

Airworthiness Directives; DG Flugzeugbau GmbH Models DG-500MB, DG-808C and DG-800B Gliders

AGENCY: Federal Aviation Administration (FAA), DOT.

ACTION: Final rule; request for comments.

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 the aviation authority of another country to identify and correct an unsafe condition on an aviation product. The MCAI describes the unsafe condition as:

Zinc-coated starter ring gears installed on Solo 2625 01 and 2625 02 engines have shown to be prone to cracking. For that reason, AD 2009-0169-E has been published in July 2009.

From that date, collected in-service data have been revealed that painted starter ring gears with lightening holes are also subject to cracks. The reason for these cracks is still unknown at the present time.

This AD requires actions that are intended to address the unsafe condition described in the MCAI.

DATES: This AD becomes effective December 21, 2009.

On December 21, 2009, the Director of the Federal Register approved the incorporation by reference of certain publications listed in this AD.

We must receive comments on this AD by January 15, 2010.

ADDRESSES: You may send comments by any of the following methods:

- *Federal eRulemaking Portal:* Go to <http://www.regulations.gov>. Follow the instructions for submitting comments.

- *Fax:* (202) 493-2251.

- *Mail:* U.S. Department of Transportation, Docket Operations, M-30, West Building Ground Floor, Room W12-140, 1200 New Jersey Avenue, SE., Washington, DC 20590.

- *Hand Delivery:* U.S. Department of Transportation, Docket Operations, M-30, West Building Ground Floor, Room W12-140, 1200 New Jersey Avenue, SE., Washington, DC 20590, between 9 a.m. and 5 p.m., Monday through Friday, except Federal holidays.

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 this AD, 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.

FOR FURTHER INFORMATION CONTACT: Greg Davison, Aerospace Engineer, FAA, Small Airplane Directorate, 901 Locust, Room 301, Kansas City, Missouri 64106; telephone: (816) 329-4130; fax: (816) 329-4090.

SUPPLEMENTARY INFORMATION:**Discussion**

The European Aviation Safety Agency (EASA), which is the Technical Agent for the Member States of the European Community, has issued EASA Emergency AD No.: 2009-0239-E, dated November 3, 2009 (referred to after this as "the MCAI"), to correct an unsafe condition for the specified products. The MCAI states:

Zinc-coated starter ring gears installed on Solo 2625 01 and 2625 02 engines have shown to be prone to cracking. For that reason, AD 2009-0169-E has been published in July 2009.

From that date, collected in-service data have been revealed that painted starter ring gears with lightening holes are also subject to cracks. The reason for these cracks is still unknown at the present time.

As a consequence, Airworthiness Directive (AD) 2009-0225 dated 22 October 2009 had been published to mandate repetitive inspections of zinc-coated starter ring gears as well as painted starter ring gears with lightening holes, and their replacement when cracks are found.

This AD retains the requirements of AD 2009-0225-E which is superseded, and extends the applicability to model DG-808C sailplanes that were inadvertently omitted in the applicability of AD 2009-0225-E. On the other hand, the required actions remain unchanged.

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

Relevant Service Information

DG Flugzeugbau GmbH has issued Technical note No. 800/36, 843/30, Revision 1, dated September 16, 2009. The actions described in this service information are intended to correct the unsafe condition identified in the MCAI.

FAA's Determination and Requirements of the AD

This product has been approved by the aviation authority of another country, and is approved for operation in the United States. Pursuant to our bilateral agreement with this State of Design Authority, they have notified us of the unsafe condition described in the MCAI and service information referenced above. We are issuing this AD because we evaluated all information provided by the State of Design Authority and determined the unsafe condition exists and is likely to exist or develop on other products of the same type design.

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 have also required different actions in this AD from those in the MCAI in order to follow FAA policies. Any such differences are described in a separate paragraph of the AD. These requirements take precedence over those copied from the MCAI.

FAA's Determination of the Effective Date

An unsafe condition exists that requires the immediate adoption of this AD. The FAA has found that the risk to the flying public justifies waiving notice and comment prior to adoption of this rule because it has been determined that zinc-coated and paint-coated starter ring gears installed on Solo 2625 01 and 2625 02 engines are prone to cracking. These engines are certificated with the airframes. One of the zinc-coated ring gears cracked, and the escaping parts caused severe damage to the starter motor, the engine mount, and the drive belt. Therefore, we determined that notice and opportunity for public comment before issuing this AD are impracticable and that good cause exists for making this amendment effective in fewer than 30 days.

Comments Invited

This AD is a final rule that involves requirements affecting flight safety, and we did not precede it by notice and opportunity for public comment. We invite you to send any written relevant data, views, or arguments about this AD.

Send your comments to an address listed under the **ADDRESSES** section. Include "Docket No. FAA-2009-1103; Directorate Identifier 2009-CE-053-AD" at the beginning of your comments. We specifically invite comments on the overall regulatory, economic, environmental, and energy aspects of this AD. We will consider all comments received by the closing date and may amend this AD because of those comments.

We will post all comments we receive, without change, to <http://www.regulations.gov>, including any personal information you provide. We will also post a report summarizing each substantive verbal contact we receive about this AD.

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 that 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.

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:

2009-24-16 DG Flugzeugbau GmbH:
Amendment 39-16110; Docket No. FAA-2009-1103; Directorate Identifier 2009-CE-053-AD.

Effective Date

(a) This airworthiness directive (AD) becomes effective December 21, 2009.

Affected ADs

(b) None.

Applicability

(c) This AD applies to Models DG-500MB, DG-808C, and DG-800B gliders, all serial numbers, certificated in any category.

Subject

(d) Air Transport Association of America (ATA) Code 80: Starting.

Reason

(e) The mandatory continuing airworthiness information (MCAI) states: Zinc-coated starter ring gears installed on Solo 2625 01 and 2625 02 engines have shown to be prone to cracking. For that reason, AD 2009-0169-E has been published in July 2009.

From that date, collected in-service data have been revealed that painted starter ring gears with lightening holes are also subject to cracks. The reason for these cracks is still unknown at the present time.

As a consequence, Airworthiness Directive (AD) 2009-0225 dated 22 October 2009 had been published to mandate repetitive inspections of zinc-coated starter ring gears as well as painted starter ring gears with lightening holes, and their replacement when cracks are found.

This AD retains the requirements of AD 2009-0225-E which is superseded, and extends the applicability to model DG-808C sailplanes that were inadvertently omitted in the applicability of AD 2009-0225-E. On the other hand, the required actions remain unchanged.

Actions and Compliance

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

(1) Before further flight after December 21, 2009 (the effective date of this AD), and repetitively thereafter before every flight, inspect the installed version of the starter ring gear for cracks following paragraph 2 of the Instructions section of DG Flugzeugbau Technical note No. 800/36, 843/30, Revision 1, dated September 16, 2009.

(2) If, during the inspection required in paragraph (f)(1) of this AD, any crack is found, before further engine operation, replace the starter ring gear following paragraph 3 of the Instructions section of DG Flugzeugbau Technical note No. 800/36, 843/30, Revision 1, dated September 16, 2009.

(3) Within 90 days after December 21, 2009 (the effective date of this AD), replace the starter ring gear following paragraph 3 of the Instructions section of DG Flugzeugbau Technical note No. 800/36, 843/30, Revision 1, dated September 16, 2009. Replacement of the starter ring gear following paragraph 3 of the Instructions section of DG Flugzeugbau Technical note No. 800/36, 843/30, Revision 1, dated September 16, 2009, terminates the repetitive inspection requirement in paragraph (f)(1) of this AD.

FAA AD Differences

Note: This AD differs from the MCAI and/or service information as follows:

Although the MCAI or service information provides for a terminating action as an option, paragraph (f)(3) of this AD requires that you perform the terminating action within 90 days after December 21, 2009 (the effective date of this AD). This is consistent with paragraph 125 of the FAA AD Manual, FAA-IR-M-8040.1B (FAA-AIR-M-8040.1), which states: "The FAA has determined that long-term continued operational safety will be better assured by design changes that remove the source of the problem, rather than by repetitive inspections or other special procedures."

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: Greg Davison, Aerospace Engineer, FAA, Small Airplane Directorate, 901 Locust, Room 301, Kansas City, Missouri 64106; telephone: (816) 329-4130; 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 EASA Emergency AD No.: 2009-0239-E, dated November 3, 2009; and DG Flugzeugbau Technical note No. 800/36, 843/30, Revision 1, dated September 16, 2009, for related information.

Material Incorporated by Reference

(i) You must use DG Flugzeugbau Technical note No. 800/36, 843/30, Revision 1, dated September 16, 2009, 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 DG Flugzeugbau GmbH, Otto-Lilienthal-Weg 2, 76646 Bruchsal, Federal Republic of Germany; telephone: +49 (0) 7251 3020140; Fax: +49 (0) 7251 3020149; Internet: <http://www.dg-flugzeugbau.de/index-e.html>; E-Mail: dirks@dg-flugzeugbau.de.

(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 November 18, 2009.

Patrick R. Mullen,

Acting Manager, Small Airplane Directorate, Aircraft Certification Service.

[FR Doc. E9-28455 Filed 11-30-09; 8:45 am]

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DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

14 CFR Parts 91, 125 and 135

[Docket No. FAA-2007-29281; Amendment Nos. 91-310, 125-58, 135-119]

RIN 2120-AJ09

Removal of Regulations Allowing for Polished Frost

AGENCY: Federal Aviation Administration (FAA), DOT.

ACTION: Final rule.

SUMMARY: The FAA is removing certain provisions in its regulations that allow for operations with “polished frost” (i.e., frost polished to make it smooth) on the wings and stabilizing and control surfaces of aircraft. The rule is expected to increase safety by not allowing operations with “polished frost,” which the FAA has determined increases the risk of unsafe flight.

DATES: These amendments become effective February 1, 2010.

FOR FURTHER INFORMATION CONTACT: For technical questions concerning this final rule contact Nancy Lauck Claussen, Air Transportation Division, AFS-200, Federal Aviation Administration, 800 Independence Avenue, SW., Washington, DC 20591; *telephone:* (202) 267-8166; *facsimile:* (202) 267-5229, *e-mail:* nancy.l.claussen@faa.gov.

For legal questions concerning this final rule contact Dean Griffith, Office of the Chief Counsel, AGC-220, Federal Aviation Administration, 800 Independence Avenue SW., Washington, DC 20591; *telephone:* (202) 267-3073; *facsimile:* (202) 267-7971; *e-mail:* dean.griffith@faa.gov.

SUPPLEMENTARY INFORMATION:

Authority for This Rulemaking

The FAA’s authority to issue rules on aviation safety is found in Title 49 of the United States Code. This rulemaking is promulgated under the authority described in 49 U.S.C. 44701(a)(5) which requires the Administrator to promulgate regulations and minimum standards for other practices, methods, and procedures necessary for safety in air commerce and national security.

I. Background

A. Summary of the Notice of Proposed Rulemaking (NPRM)

The FAA published an NPRM in the **Federal Register** on May 8, 2008 (73 FR 26049). The NPRM proposed to remove language permitting pilots to takeoff with polished frost adhering to the wings or stabilizing or control surfaces from §§ 91.527(a)(3), 125.221(a), and 135.227(a). The NPRM also proposed to restructure §§ 91.527(b), 125.221(c), and 135.227(c) to clarify the provisions of those sections. The comment period closed on August 6, 2008.

As discussed in the NPRM, the FAA has recognized that adverse aerodynamic effects on lifting surfaces begin as soon as frost begins to adhere to the surfaces. For example, the presence of frost may: (1) Reduce a wing’s maximum lift by 30 percent or more; (2) reduce the angle of attack for

maximum lift by several degrees; (3) increase drag significantly; and (4) change unexpectedly the aircraft’s handling qualities and performance. The severity of these adverse aerodynamic effects varies significantly depending on: (1) The thickness, density, and location of the frost; (2) the degree of the surface roughness; and (3) the location of the roughness relative to the surface leading edge where significant variations may occur in the local airspeed and surface air loads.

Although polishing frost is currently permitted under part 91 subpart F, and parts 125 and 135, current FAA guidance developed subsequent to the implementation of those regulations cautions against this practice. In Advisory Circular (AC) 135-17, the FAA recommends that all wing frost be removed prior to takeoff, and states that if an operator desires to polish the frost, the aircraft manufacturer’s recommended procedures should be followed. See AC 135-17, *PILOT GUIDE Small Aircraft Ground Deicing* (Dec. 14, 1994). Additionally, the FAA issued two Safety Alerts for Operators (SAFOs) regarding polishing frost. SAFO 06002 advises that “operators should avoid smooth or polished frost on lift-generating surfaces as an acceptable preflight condition.” See SAFO 06002, *Ground Deicing Practices for Turbine Aircraft in Nonscheduled 14 CFR Part 135 Operations and in Part 91* (Mar. 29, 2006). SAFO 06014 states that the FAA cannot support the practice of polishing frost “unless an aircraft manufacturer developed explicit, approved procedures for doing so,” and pilots are trained in those procedures. See SAFO 06014, *Polished Frost* (Oct. 6, 2006). The FAA is not aware of any current aircraft manufacturer that has issued recommended procedures for (1) polishing frost, or (2) conducting operations with polished frost. This rulemaking codifies the FAA’s current guidance regarding this practice.

Operational concerns also support removing the provisions permitting polishing frost from the regulations. The FAA has no data to support practical guidance for determining how to polish frost on a surface to make it acceptably smooth, other than completely removing the frost and returning the aircraft’s critical lifting surfaces to uncontaminated smoothness. Moreover, there is no standard of acceptable smoothness for polished frost provided in regulation, guidance, or by manufacturers. Also, the FAA believes that in an operational environment it is impossible to determine whether the polished frost surface is uniformly, or symmetrically, smooth.