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[4910-13-P]

DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

14 CFR Part 39

[Docket No. FAA-2017-0158; Directorate Identifier 2016-CE-040-AD; Amendment 39-18902; AD 2017-11-03]

RIN 2120-AA64

Airworthiness Directives; DG Flugzeugbau GmbH Gliders

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

ACTION: Final Rule.

SUMMARY: We are adopting a new airworthiness directive (AD) for DG Flugzeugbau GmbH Model DG-500MB gliders that are equipped with a Solo 2625 02 engine that has been modified with a fuel injection system following the instructions of Solo Kleinmotoren GmbH Service Bulletin (SB)/Technische Mitteilung (TM) 4600-3 “Fuel Injection System” and re-identified as Solo 2625 02i. 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 failure of the connecting rod bearing resulting from too much load on the rod bearings from the engine control unit. We are issuing this AD to require actions to address the unsafe condition on these products.

DATES: This AD is effective [INSERT DATE 35 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER].

The Director of the Federal Register approved the incorporation by reference of a certain publications listed in the AD as of [INSERT DATE 35 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER].

ADDRESSES: You may examine the AD docket on the Internet at <http://www.regulations.gov> by searching for and locating Docket No. FAA-2017-0158; 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 service information identified in this AD, contact Solo Kleinmotoren GmbH, Postfach 600152, 71050 Sindelfingen, Germany; telephone: +49 703 1301-0; fax: +49 703 1301-136; email: aircraft@solo-germany.com; Internet: <http://aircraft.solo-online.com>. 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. It is also available on the Internet at <http://www.regulations.gov> by searching for Docket No. FAA-2017-0158.

FOR FURTHER INFORMATION CONTACT: Jim Rutherford, Aerospace Engineer, 901 Locust, Room 301, Kansas City, Missouri 64106; telephone: (816) 329-4165; fax: (816) 329-4090; email: jim.rutherford@faa.gov.

SUPPLEMENTARY INFORMATION:

Discussion

We issued a notice of proposed rulemaking (NPRM) to amend 14 CFR part 39 by adding an AD that would apply to DG Flugzeugbau GmbH Model DG-500MB gliders. The NPRM was published in the *Federal Register* on March 2, 2017 (82 FR 12312). The NPRM proposed to correct an unsafe condition for the specified products and was based on mandatory continuing airworthiness information (MCAI) originated by an aviation authority of another country. The MCAI states:

Several occurrences have been reported of connecting rod bearing failure.

This condition, if not corrected, could lead to an uncommanded in-flight engine shut-down, possibly resulting in damage to the powered sailplane.

To address this unsafe condition, Solo Kleinmotoren developed a software update for the engine control unit (ECU) to reduce the load on the rod bearings, and issued SB/TM 4600-6, providing instructions to upload the modified software into the ECU.

For the reason described above, this [EASA] AD requires a modification, updating the ECU software.

The MCAI can be found in the AD docket on the Internet at:

<https://www.regulations.gov/document?D=FAA-2017-0158-0002>.

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 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 for correcting the unsafe condition; and
- Do not add any additional burden upon the public than was already proposed in the NPRM.

Related Service Information under 1 CFR part 51

We reviewed Solo Kleinmotoren GmbH Technische Mitteilung (English translation: Service Bulletin), Nr. 4600-6, Ausgabe 1 (English translation: Issue 1), dated November 16, 2016. The service information describes procedures for a software update that provides new settings to the engine control unit (ECU) to lower the load on the bearings of the crankshaft. This service information is reasonably available because the interested parties have access to it through their normal course of business or by the means identified in the ADDRESSES section of the AD.

Costs of Compliance

We estimate that this AD will affect 3 products of U.S. registry. We also estimate that it would take about 2 work-hours per product to comply with the basic requirements of this AD. The average labor rate is \$85 per work-hour.

Based on these figures, we estimate the cost of this AD on U.S. operators to be \$510, or \$170 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-2017-0158; 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:

2017-11-03 DG Flugzeugbau GmbH: Amendment 39-18902; Docket No. FAA-2017-0158; Directorate Identifier 2016-CE-040-AD.

(a) Effective Date

This airworthiness directive (AD) becomes effective [INSERT DATE 35 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER].

(b) Affected ADs

None.

(c) Applicability

This AD applies to DG Flugzeugbau GmbH Model DG-500MB gliders, all serial numbers, that are:

- (1) equipped with a Solo 2625 02 engine that has been modified with a fuel injection system following the instructions of Solo Kleinmotoren GmbH Service Bulletin (SB)/Technische Mitteilung (TM) 4600-3 “Fuel Injection System” and re-identified as Solo 2625 02i, and with a serial number (S/N) up to 369/207, except S/N’s 354/194, 356/196, 357/197, 358/198, 361/201, 362/202, 363/203, 364/204, and 368/206; and
- (2) certificated in any category.

(d) Subject

Air Transport Association of America (ATA) Code 73: Engine Fuel & Control.

(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 failure of the connecting rod bearing resulting from too much load on the rod bearings from the engine control unit. We are issuing this AD to prevent such failure that could lead to an uncommanded in-flight engine shut-down, which could result in damage to the glider.

(f) Actions and Compliance

Unless already done, do the following actions in paragraphs (f)(1) and (2) of this AD:

(1) Within the next 60 days after [INSERT DATE 35 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER] (the effective date of this AD), modify the engine by installing a software update for the engine control unit (ECU) following the actions in Solo Kleinmotoren GmbH Technische Mitteilung (English translation: Service Bulletin), Nr. 4600-6, Ausgabe 1 (English translation: Issue 1), dated November 16, 2016.

(2) After the modification of an engine as required by paragraph (f)(1) of this AD, do not install a replacement ECU on that engine and do not upload any software update to the ECU of that engine unless the ECU software version is as specified in Solo Kleinmotoren GmbH Technische Mitteilung (English translation: Service Bulletin), Nr. 4600-6, Ausgabe 1 (English translation: Issue 1), dated November 16, 2016.

Note 1 to paragraph (f)(1) and (2) of this AD: This service information contains German to English translation. The EASA used the English translation in referencing the document. For enforceability purposes, we will refer to the Solo Kleinmotoren service information as it appears on the document.

(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: Jim Rutherford, Aerospace Engineer, 901 Locust, Room 301, Kansas City, Missouri 64106; telephone: (816) 329-4165; fax: (816) 329-4090; email: jim.rutherford@faa.gov. Before using any

approved AMOC on any glider 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.: 2016-0254, dated December 15, 2016, correction dated January 4, 2017, for related information. You may examine the MCAI on the Internet at <http://www.regulations.gov> by searching for and locating Docket No. FAA-2017-0158.

(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.

(i) Solo Kleinmotoren GmbH Technische Mitteilung (English translation: Service Bulletin), Nr. 4600-6, Ausgabe 1 (English translation: Issue 1), dated November 16, 2016.

(ii) Reserved.

Note 2 to paragraph (i)(2)(i) of this AD: This service information contains German to English translation. The EASA used the English translation in referencing the document. For enforceability purposes, we will refer to the Solo Kleinmotoren service information as it appears on the document.

(3) For Solo Kleinmotoren GmbH service information identified in this AD, contact Solo Kleinmotoren GmbH, Postfach 600152, 71050 Sindelfingen, Germany; telephone: +49 703 1301-0; fax: +49 703 1301-136; email: aircraft@solo-germany.com; Internet: <http://aircraft.solo-online.com>.

(4) You may review 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. The MCAI can be found in the AD docket on the Internet at: <https://www.regulations.gov/document?D=FAA-2017-0158-0002>.

(5) 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 May 15, 2017.

Melvin Johnson,
Acting Manager, Small Airplane Directorate,
Aircraft Certification Service.

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