

# **SERVICE INFORMATION**

## **NO. SI 42-221 /**

## **SI 42NG-085**

**NOTE:** SI's are used only:  
1) To distribute information from DAI to our customers.  
2) To distribute applicable information/documents from our suppliers to our customers with additional information.  
Typically there is no revision service for SI's. Each new information or change of that will be sent along with a new SI.

### **I. TECHNICAL DETAILS**

#### **1.1 Airplanes affected:**

Models DA 42, DA 42 M-NG, DA 42 NG

Serial numbers:

42.004 through 42.427,  
42.AC001 through 42.AC151,  
42.M001 through 42.M026,  
42.N001 through 42.N067,  
42.N100 through 42.N129,  
42.NC001 through 42.NC008,  
42.MN001 through 42.MN033

#### **1.2 Subject:**

FAA Airworthiness Directive No. 2017-18-10

ATA-Code: 27-00

#### **1.3 Reason:**

FAA issued the Airworthiness Directive No. 2017-18-10 mandating inspections and modification of the flap control system, repetitive inspections of the flap bell crank, and in case of any findings, replacement of the flap bell crank with an improved design.

#### **1.4 Information:**

For detailed technical information refer to FAA Airworthiness Directive No. 2017-18-10 which is applicable without any further additions or restrictions.

### **II. OTHERS**

FAA Airworthiness Directive No. 2017-18-10 is attached to this Service Information.

In case of doubt contact Diamond Aircraft Industries.

[Federal Register Volume 82, Number 171 (Wednesday, September 6, 2017)]  
[Rules and Regulations]  
[Pages 42029-42031]  
From the Federal Register Online via the Government Publishing Office [www.gpo.gov]  
[FR Doc No: 2017-18624]

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## **DEPARTMENT OF TRANSPORTATION**

### **Federal Aviation Administration**

#### **14 CFR Part 39**

**[Docket No. FAA-2017-0638; Product Identifier 2017-CE-018-AD; Amendment 39-19019; AD 2017-18-10]**

**RIN 2120-AA64**

#### **Airworthiness Directives; Diamond Aircraft Industries GmbH Airplanes**

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

**ACTION:** Final rule.

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**SUMMARY:** We are adopting a new airworthiness directive (AD) for certain Diamond Aircraft Industries GmbH Models DA 42, DA 42 M-NG, and DA 42 NG 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 crack formation on the flap bell crank, which could cause the flap bell crank to fail. We are issuing this AD to require actions to address the unsafe condition on these products.

**DATES:** This AD is effective October 11, 2017.

The Director of the Federal Register approved the incorporation by reference of certain publications listed in this AD as of October 11, 2017.

**ADDRESSES:** You may examine the AD docket on the Internet at <http://www.regulations.gov> by searching for and locating Docket No. FAA-2017-0638; 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 Diamond Aircraft Industries GmbH, N.A. Otto-Straße 5, A-2700 Wiener Neustadt, Austria, telephone: +43 2622 26700; fax: +43 2622 26780; email: [office@diamond-air.at](mailto:office@diamond-air.at); Internet: <http://www.diamondaircraft.com>. You may view this referenced service information at the FAA, Policy and Innovation Division, 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-2017-0638.

**FOR FURTHER INFORMATION CONTACT:** Mike Kiesov, Aerospace Engineer, FAA, Small Airplane Standards Branch, 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 by adding an AD that would apply to certain Diamond Aircraft Industries GmbH Models DA 42, DA 42 M-NG, and DA 42 NG airplanes. The NPRM was published in the Federal Register on June 23, 2017 (82 FR 28594). 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:

Cracks and deformation have been found on the flap bell crank Part Number (P/N) D60-2757-11-00. Frequent high load conditions have been identified as the root cause.

This condition, if not detected and corrected, could lead to failure of the flap bell crank and consequent reduced control of the aeroplane.

To address this potential unsafe condition, Diamond Aircraft Industries (DAI) issued Mandatory Service Bulletin (MSB) 42-126/MSB 42NG-066 and the corresponding Work Instruction (WI) MSB 42-126/WI-MSB 42NG-066 (single document), hereafter referred to as 'the applicable MSB' in this [EASA] AD, providing inspection and modification instructions.

For the reason described above, this [EASA] AD requires modification of the flap control system by installing two spacers to replace a single long spacer, repetitive inspections of the flap bell crank, and, depending on findings, replacement of the flap bell crank with an improved part. Installation of an improved flap bell crank constitutes terminating action for the repetitive inspections required by this [EASA] AD.

The MCAI can be found in the AD docket on the Internet at <https://www.regulations.gov/document?D=FAA-2017-0638-0002>.

### **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 this 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 Diamond Aircraft Industries GmbH Mandatory Service Bulletin MSB 42-126 MSB/42NG-066, dated March 27, 2017 (single document), and Work Instruction WI-MSB 42-126/WI-MSB 42NG-066, dated March 27, 2017 (single document). In combination, this service information describes procedures for repetitively inspecting the flap bell crank for cracks, replacing the flap bell crank if cracks are found, and modification of the flap control system. 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 this AD.

## **Costs of Compliance**

We estimate that this AD will affect 190 products of U.S. registry. We also estimate that it will take about 4 work-hours per product to comply with the initial inspection requirement of this AD. The average labor rate is \$85 per work-hour.

Based on these figures, we estimate the cost of the initial inspection requirement of this AD on U.S. operators to be \$64,000, or \$340 per product.

We also estimate that it will take about 2 work-hours per product to comply with the repetitive inspection requirement of this AD. The average labor rate is \$85 per work-hour.

Based on these figures, we estimate the cost of the repetitive inspection requirement of this AD on U.S. operators to be \$32,300, or \$170 per product.

In addition, we estimate that any necessary replacement action will take about 1 work-hour and require parts costing \$430, for a cost of \$515 per product. We have no way of determining the number of products that may need these actions.

According to the manufacturer, some of the costs of this AD may be covered under warranty, thereby reducing the cost impact on affected individuals. We do not control warranty coverage for affected individuals. As a result, we have included all costs in our cost estimate.

## **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.

This AD is issued in accordance with authority delegated by the Executive Director, Aircraft Certification Service, as authorized by FAA Order 8000.51C. In accordance with that order, issuance of ADs is normally a function of the Compliance and Airworthiness Division, but during this transition period, the Executive Director has delegated the authority to issue ADs applicable to small airplanes and domestic business jet transport airplanes to the Director of the Policy and Innovation Division.

## **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-2017-0638; 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:



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**2017-18-10 Diamond Aircraft Industries GmbH:** Amendment 39-19019; Docket No. FAA-2017-0638; Product Identifier 2017-CE-018-AD.

**(a) Effective Date**

This airworthiness directive (AD) becomes effective October 11, 2017.

**(b) Affected ADs**

None.

**(c) Applicability**

This AD applies to Diamond Aircraft Industries GmbH Models DA 42, DA 42 M-NG, and DA 42 NG airplanes, serial numbers 42.004 through 42.427, 42.AC001 through 42.AC151, 42.M001 through 42.M026, 42.N001 through 42.N067, 42.N100 through 42.N129, 42.NC001 through 42.NC008, and 42.MN001 through 42.MN033, certificated in any category.

**(d) Subject**

Air Transport Association of America (ATA) Code 27: Flight Controls.

**(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 crack formation on the flap bell crank. We are issuing this AD to prevent failure of the flap bell crank, which could result in reduced control.

**(f) Actions and Compliance**

Unless already done, do the following actions:

(1) Inspect the flap bell crank, part number (P/N) D60-2757-11-00, and modify the flap control system by installing two spacers, P/N DS BU2-10-06-0065-C, where the flap actuator rod end bearing is connected to the flap bell crank, following the Instructions section in Diamond Aircraft Industries GmbH (DAI) Work Instruction WI-MSB 42-126/WI-MSB 42NG-066, dated March 27, 2017 (single document), as specified in DAI Mandatory Service Bulletin MSB 42-126/MSB 42NG-066, dated March 27, 2017 (single document), at whichever of the following compliance times occurs later:

(i) Before exceeding 600 hours time-in-service (TIS), and repetitively thereafter at intervals not to exceed 200 hours TIS.

(ii) Within the next 100 hours TIS after October 11, 2017 (the effective date of this AD) or within the next 6 months after October 11, 2017 (the effective date of this AD), whichever occurs first, and repetitively thereafter at intervals not to exceed 200 hours TIS.

(2) If any discrepancies are found during any inspection required in paragraph (f)(1) of this AD, before further flight, replace the flap bell crank with an improved part, P/N D60-2757-11-00\_01, following the Instructions section in DAI Work Instruction WI-MSB 42-126/WI-MSB 42NG-066, dated March 27, 2017 (single document), as specified in DAI Mandatory Service Bulletin MSB 42-126/MSB 42NG-066, dated March 27, 2017 (single document). Installing P/N D60-2757-11-00\_01 terminates the repetitive inspections required in paragraph (f)(1) of this AD. This installation as terminating action may be done in lieu of the inspections required in paragraph (f)(1) of this AD.

**(g) Other FAA AD Provisions**

The following provisions also apply to this AD:

(1) Alternative Methods of Compliance (AMOCs): The Manager, Small Airplane Standards Branch, 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, Small Airplane Standards Branch, FAA 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) Contacting the Manufacturer: For any requirement in this AD to obtain corrective actions from a manufacturer, the action must be accomplished using a method approved by the Manager, Small Airplane Standards Branch, FAA; or the European Aviation Safety Agency (EASA); or if there is a delegated foreign airworthiness authority Design Organization Approval (DOA). If approved by the DOA, the approval must include the DOA-authorized signature.

**(h) Related Information**

Refer to MCAI European Aviation Safety Agency (EASA) AD No. 2017-0074, dated April 28, 2017. You may examine the MCAI on the Internet at <https://www.regulations.gov/document?D=FAA-2017-0638-0002>.

**(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 this AD specifies otherwise.

(i) Diamond Aircraft Industries GmbH Mandatory Service Bulletin MSB 42-126/MSB 42NG-066, dated March 27, 2017 (single document).

(ii) Diamond Aircraft Industries GmbH Work Instruction WI-MSB 42-126/WI-MSB 42NG-066, dated March 27, 2017 (single document).

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

(4) You may view this service information at the FAA, Policy and Innovation Division, 901 Locust, Kansas City, Missouri 64106. For information on the availability of this material at the FAA, call (816) 329-4148. In addition, you can access this service information on the Internet at <http://www.regulations.gov> by searching for and locating Docket No. FAA-2017-0638.

(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 August 28, 2017.  
Melvin Johnson,  
Deputy Director, Policy and Innovation Division,  
Aircraft Certification Service.