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## **DEPARTMENT OF TRANSPORTATION**

### **Federal Aviation Administration**

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

**[Docket No. FAA-2009-0574; Directorate Identifier 2009-CE-028-AD; Amendment 39-16030; AD 2009-20-07]**

**RIN 2120-AA64**

**Airworthiness Directives; DORNIER LUFTAHRT GmbH Models Dornier 228-100, Dornier 228-101, Dornier 228-200, Dornier 228-201, and Dornier 228-202 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 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 stub axle failure of the main landing gear on a Dornier 228-200 aeroplane was reported to RUAG Aerospace. Investigations revealed that the fracture of the axle—manufacturer Part Number (P/N) A-511000B28B was due to fatigue. Already in the year 1993 two failures of P/N A-511000B28B axles occurred. Those events led in 1994 the Luftfahrt-Bundesamt—Germany's National Aviation Authority—to publish Airworthiness Directive (AD) D-1994-042 to mandate the replacement of A-511000B28B axles by improved-design axle with P/N A-511000C28B (Dornier Luftfahrt GmbH Service bulletin 228-214).

It is believed that a misinterpretation of the Dornier 228 repair/maintenance documentation caused inadvertent installation of A-511000B28B axle on the accident aeroplane's main landing gear with P/N A-511000C00F. This configuration was not approved for installation and was therefore not addressed by LBA AD D-1994-042 or Dornier SB-228-214.

The actions specified in this Airworthiness Directive are intended to prevent main landing gear failure, which could result in loss of control of the aeroplane during landing operations.

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

**DATES:** This AD becomes effective November 3, 2009.

On November 3, 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:** Greg Davison, Glider Program Manager, FAA, Small Airplane Directorate, 901 Locust, Room 301, Kansas City, Missouri 64106; telephone: (816) 329-4130; 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 June 25, 2009 (74 FR 30247). That NPRM proposed to correct an unsafe condition for the specified products. The MCAI states:

A stub axle failure of the main landing gear on a Dornier 228-200 aeroplane was reported to RUAG Aerospace. Investigations revealed that the fracture of the axle—manufacturer Part Number (P/N) A-511000B28B was due to fatigue. Already in the year 1993 two failures of P/N A-511000B28B axles occurred. Those events led in 1994 the Luftfahrt-Bundesamt—Germany's National Aviation Authority—to publish Airworthiness Directive (AD) D-1994-042 to mandate the replacement of A-511000B28B axles by improved-design axle with P/N A-511000C28B (Dornier Luftfahrt GmbH Service bulletin 228-214).

It is believed that a misinterpretation of the Dornier 228 repair/maintenance documentation caused inadvertent installation of A-511000B28B axle on the accident aeroplane's main landing gear with P/N A-511000C00F. This configuration was not approved for installation and was therefore not addressed by LBA AD D-1994-042 or Dornier SB-228-214.

The actions specified in this Airworthiness Directive are intended to prevent main landing gear failure, which could result in loss of control of the aeroplane during landing operations.

### **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**

We estimate that this AD will affect 15 products of U.S. registry. We also estimate that it would take about 1 work-hour 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 on U.S. operators to be \$1,200 or \$80 per product.

In addition, we estimate that any necessary follow-on actions would take about 16 work-hours and require parts costing \$23,734, for a cost of \$25,014 per product. We have no way of determining the number of products that may need these actions.

## **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:



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**2009-20-07 Dornier Luftfahrt GmbH:** Amendment 39-16030; Docket No. FAA-2009-0574; Directorate Identifier 2009-CE-028-AD.

**Effective Date**

- (a) This airworthiness directive (AD) becomes effective November 3, 2009.

**Affected ADs**

- (b) None.

**Applicability**

(c) This AD applies to Models Dornier 228-100, Dornier 228-101, Dornier 228-200, Dornier 228-201, and Dornier 228-202 airplanes, all serial numbers, certificated in any category.

**Subject**

- (d) Air Transport Association of America (ATA) Code 32: Landing Gear.

**Reason**

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

A stub axle failure of the main landing gear on a Dornier 228-200 aeroplane was reported to RUAG Aerospace. Investigations revealed that the fracture of the axle—manufacturer Part Number (P/N) A-511000B28B was due to fatigue. Already in the year 1993 two failures of P/N A-511000B28B axles occurred. Those events led in 1994 the Luftfahrt-Bundesamt—Germany's National Aviation Authority—to publish Airworthiness Directive (AD) D-1994-042 to mandate the replacement of A-511000B28B axles by improved-design axle with P/N A-511000C28B (Dornier Luftfahrt GmbH Service bulletin 228-214).

It is believed that a misinterpretation of the Dornier 228 repair/maintenance documentation caused inadvertent installation of A-511000B28B axle on the accident aeroplane's main landing gear with P/N A-511000C00F. This configuration was not approved for installation and was therefore not addressed by LBA AD D-1994-042 or Dornier SB-228-214.

The actions specified in this Airworthiness Directive are intended to prevent main landing gear failure, which could result in loss of control of the aeroplane during landing operations.

The MCAI requires inspection of the main landing gear (MLG) and, if applicable, replacement of the MLG stub axle.

**Actions and Compliance**

- (f) Unless already done, do the following actions following RUAG Aerospace Defence Technology Dornier 228 Service Bulletin SB-228-276, dated October 16, 2008:

(1) Within the next 14 days after November 3, 2009 (the effective date of this AD), inspect the main landing gear (MLG) stub axle.

(2) If any P/N A-511000B28B stub axle is found, before accumulation of 9,500 total landings on the axle, or before further flight if total landings on the axle exceed 9,500 total landings on November 3, 2009 (the effective date of this AD), replace the axle or the housing assembly with a new axle P/N A-511000C28B. If the total number of landings accumulated by the stub axle cannot be positively determined, the stub axle must be considered to have accumulated more than 9,500 total landings.

(3) Operators that do not have landing (or cycle) records may determine the number of landings (or cycles) by dividing the number of hours time-in-service of each airplane by the time of the average flight for the aircraft of that type in the operator's fleet.

**Note 1:** P/N A-511000C28B axle together with the housings P/N A-511000C27B and P/N A-521000C27B form the Axle Assemblies P/N AD511010A00C and P/N AD521010A00C, which are life limited to 48,000 landings per the Dornier 228 Time Limits/Maintenance Checks Manual (TLMCM) Chapter 05-10-10.

(4) As of November 3, 2009 (the effective date of this AD), do not install MLG assemblies P/N A-511000C00F and P/N A-521000C00F fitted with a P/N A-511000B28B stub axle on any airplane.

### **FAA AD Differences**

**Note 2:** 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: 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 EASA AD No.: 2009-0062, dated March 13, 2009; and RUAG Aerospace Defence Technology Dornier 228 Service Bulletin SB-228-276, dated October 16, 2008, for related information.

## **Material Incorporated by Reference**

(i) You must use RUAG Aerospace Defence Technology Dornier 228 Service Bulletin SB-228-276, dated October 16, 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 RUAG Aerospace Services GmbH, Dornier 228 Customer Support, P.O. Box 1253, 82231 Wessling, Federal Republic of Germany, telephone: +49 (0)8153-30-2280; fax: +49 (0) 8153-30-3030; E-mail: [custsupport.dorner228@ruag.com](mailto:custsupport.dorner228@ruag.com); Internet: <http://www.ruag.com/>.

(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](http://www.archives.gov/federal_register/code_of_federal_regulations/ibr_locations.html).

Issued in Kansas City, Missouri, on September 21, 2009.

Scott A. Horn,

Acting Manager, Small Airplane Directorate, Aircraft Certification Service.

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