



Airworthiness Directive

AD No.: 2019-0307R1

Issued: 28 March 2023

Note: This Airworthiness Directive (AD) is issued by EASA, acting in accordance with Regulation (EU) 2018/1139 on behalf of the European Union, its Member States and of the European third countries that participate in the activities of EASA under Article 129 of that Regulation.

This AD is issued in accordance with Regulation (EU) 748/2012, Part 21.A.3B. In accordance with Regulation (EU) 1321/2014 Annex I Part M.A.301, or Annex Vb Part ML.A.301, as applicable, the continuing airworthiness of an aircraft shall be ensured by accomplishing any applicable ADs. Consequently, no person may operate an aircraft to which an AD applies, except in accordance with the requirements of that AD, unless otherwise specified by the Agency [Regulation (EU) 1321/2014 Annex I Part M.A.303, or Annex Vb Part ML.A.303, as applicable] or agreed with the Authority of the State of Registry [Regulation (EU) 2018/1139, Article 71 exemption].

Design Approval Holder's Name:

General Atomics AeroTec Systems GmbH

Type/Model designation(s):

Dornier 228-212 aeroplanes

Effective Date: Revision 1: 11 April 2023
Original Issue: 01 January 2020

TCDS Number(s): EASA.A.359

Foreign AD: Not applicable

Revision: This AD revises EASA AD 2019-0307 dated 18 December 2019, which superseded EASA Emergency AD 2006-0352-E dated 24 November 2006.

ATA 32 – Landing Gear – Carbon Brake Assembly – Inspection / Replacement

Manufacturer(s):

General Atomics AeroTec Systems GmbH (General Atomics), formerly RUAG Aerospace Services GmbH, Fairchild Dornier GmbH, Dornier Luftfahrt GmbH.

Applicability:

Dornier 228-212 aeroplanes, all serial numbers.

Definitions:

For the purpose of this AD, the following definitions apply:

The ASB: RUAG Aerospace Services Alert Service Bulletin (ASB) Dornier 228-265 Revision 1.

Affected part: Carbon Brake Assemblies, having Part Number (P/N) 5009850-1, P/N 5009850-2, P/N 5009850-3 or P/N 5009850-4, except those which have been overhauled, reworked or modified as defined in the ASB.

Serviceable part: Carbon Brake Assemblies, eligible for installation, which are not affected parts.



Groups:

Group 1 aeroplanes are those that have an affected part installed.

Group 2 aeroplanes are those that have only serviceable part installed.

Reason:

During a maintenance inspection, loose bolts and nuts were detected on the landing gear carbon brake assembly.

This condition, if not detected and corrected, could result in detachment of the brake assembly and subsequent malfunction, degrading brake performance, and loss of control of the aeroplane during landing or roll-out, possibly resulting in damage to the aeroplane and injury to occupants.

RUAG issued ASB Dornier 228-265 (original issue) to provide instructions for a visual inspection of the bolts, the gap between brake housing subassembly and torque tube assembly and hydraulic plumbing. Consequently, the Luftfahrt-Bundesamt (LBA) issued a mandatory measure under EU Regulation (EC) 1592/2002, Article 10(1) for affected aeroplanes registered in Germany and notified EASA. The Agency concurred with the LBA action and issued EASA Emergency AD 2006-0352-E to require inspection of the affected brake assembly and, depending on findings, replacement with a serviceable brake assembly.

After that Emergency AD was issued, RUAG was informed by the manufacturer of the brake assembly that anti-seize and screw locking compound have been applied in a wrong way during production of new brake assemblies.

Prompted by this finding, RUAG issued the ASB Revision 1, to amend the intervals (reducing the flight hours (FH) interval, adding a flight cycle (FC) interval and deleting the calendar time interval) of the repetitive inspections. Consequently EASA issued AD 2019-0307, superseding EASA AD 2006-0352-E, requiring the inspections within the amended compliance times.

Since that AD was issued, comments and requests for clarifications have been received. Consequently, this AD is revised to include reference to the ASB Revision 2, which introduced brake assembly modification as possible terminating action, to provide clarifications, and to include reference to the new design approval holder.

Required Action(s) and Compliance Time(s):

Required as indicated, unless accomplished previously:

Inspection(s):

- (1) Group 1 aeroplanes: Before next flight after 27 November 2006 [the effective date of EASA AD 2006-0352-E] and, thereafter, at intervals not to exceed 50 FH or 150 FC, whichever occurs first, inspect each affected part in accordance with the instructions of the ASB.
- (2) Group 2 aeroplanes: Before next flight after 27 November 2006 [the effective date of EASA AD 2006-0352-E] inspect each serviceable part in accordance with the instructions of the ASB.



Corrective Action(s):

- (3) For Group 1 and Group 2 aeroplanes: If, during any inspection as required by paragraph (1) or (2) of this AD, as applicable, discrepancies, as identified in the ASB, are detected on a carbon brake assembly, before next flight, contact RUAG Aerospace Services Dornier 228 Customer Support or General Atomics Customer Support, as applicable, for approved corrective action instructions and accomplish those instructions accordingly; or before next flight replace that carbon brake assembly with a serviceable part.

Credit:

- (4) Inspection(s) and corrective action(s) accomplished on an aeroplane before 01 January 2020 [the effective date of the original issue of this AD] in accordance with the instructions of the ASB at original issue are acceptable to comply with the initial requirements of paragraphs (1) and (2) of this AD for that aeroplane.

Terminating Action:

- (5) Replacing each affected part on an aeroplane with a serviceable part constitutes terminating action for the repetitive inspections specified as required by paragraph (1) of this AD for that aeroplane, provided no affected parts are reinstalled on that aeroplane.

Parts Installation:

- (6) From the effective date of this AD, it is allowed to install an affected part on an aeroplane, provided that, prior to installation, it has passed an inspection in accordance with the instructions of the ASB, and that, following installation, the affected part is inspected as required by this AD.

Ref. Publications:

RUAG ASB Dornier 228-265 original issue dated 17 November 2006, and Revision 1 dated 02 September 2019, and Revision 2 dated 10 December 2019.

RUAG Dornier 228 TM-TLMCM-228-090305-ALL Revision 8 dated 01 August 2018.

RUAG Dornier 228 TM-TLMCM-228-00002-150610 Revision 4 dated 01 August 2018.

The use of later approved revisions of the above-mentioned documents (that may be published by General Atomics, the current design approval holder) is acceptable for compliance with the requirements of this AD.

Remarks:

1. If requested and appropriately substantiated, EASA can approve Alternative Methods of Compliance for this AD.
2. The original issue of this AD was posted on 27 September 2019 as PAD 19-182 for consultation until 25 October 2019. The Comment Response Document can be found in the [EASA Safety Publications Tool](#), in the compressed (zipped) file attached to the record for this AD.
3. Enquiries regarding this AD should be referred to the EASA Safety Information Section, Certification Directorate. E-mail: ADs@easa.europa.eu.



4. Information about any failures, malfunctions, defects or other occurrences, which may be similar to the unsafe condition addressed by this AD, and which may occur, or have occurred on a product, part or appliance not affected by this AD, can be reported to the [EU aviation safety reporting system](#). This may include reporting on the same or similar components, other than those covered by the design to which this AD applies, if the same unsafe condition can exist or may develop on an aircraft with those components installed. Such components may be installed under an FAA Parts Manufacturer Approval (PMA), Supplemental Type Certificate (STC) or other modification.
5. For any question concerning the technical content of the requirements in this AD, please contact: General Atomics AeroTec Systems GmbH, Dornier 228 Customer Support, Claude-Dornier-Strasse 1, 82234 Wessling, Federal Republic of Germany, E-mail: CustSupport.Dornier228@ga-ats.com.

