



Notification of a Proposal to issue an Airworthiness Directive

PAD No.: 24-044

Issued: 15 April 2024

Note: This Proposed Airworthiness Directive (PAD) 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.

In accordance with the EASA Continuing Airworthiness Procedures, the Executive Director is proposing the issuance of an EASA Airworthiness Directive (AD), applicable to the aeronautical product(s) identified below.

All interested persons may send their comments, referencing the PAD Number above, to the e-mail address specified in the 'Remarks' section, prior to the consultation date indicated.

Design Approval Holder's Name:

DG AVIATION GmbH

Type/Model designation(s):

DG -100, DG-200, DG-300, DG-400, DG-500, DG-600, DG-800 and DG-1000 sailplanes and powered sailplanes

Effective Date: [TBD - standard: 14 days after AD issue date]

TCDS Number(s): EASA.A.067, EASA.A.072, EASA.A.233 and EASA.A.239

Foreign AD: Not applicable

Supersedure: None

ATA 27 – Flight Controls – Automatic Elevator Connection – Inspection / Replacement

Manufacturer(s):

Glaser-Dirks Flugzeugbau GmbH

Elan Tozd Plastika

Elan Tovarna Sportnega Orodja

DG-Flugzeugbau GmbH

ELAN LINE D.O.O.

AMS-Flight d.o.o.

Volocopter Production GmbH

Applicability:

DG-100G, DG-100G ELAN, DG-200, DG-200/17, DG-200/17C, DG-300, DG-300 ELAN, DG-300 Club ELAN, DG-300 ELAN ACRO, DG-300 Club ELAN ACRO, DG-400, DG-600, DG-600/18, DG-600M and DG-600/18 M sailplanes and powered sailplanes, all serial numbers (s/n), except those equipped with l'Hotellier connections of the elevator control; and



DG-500/22 ELAN, DG-500 ELAN Trainer, DG-500/20 ELAN, DG-500 ELAN ORION, DG-500 M and DG-500 MB sailplanes and powered sailplanes, all s/n; and

DG-800 A, DG-800 B, DG-808C, DG-800 LA, DG-800 S and DG-808 S sailplanes and powered sailplanes, all s/n; and

DG-1000S, DG-1000T, DG-1000M and DG-1001E sailplanes and powered sailplanes, all s/n.

Definitions:

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

Affected part: Elevator pushrod end and elevator roller having Part Number (P/N) as specified in the TN, as applicable to (powered) sailplane model.

The TN: DG Aviation Technical Notes (TN) DG-SS-09, or TN 500/17, or TN 800/50, or TN 1000/50, as applicable to (powered) sailplane model.

Groups:

Group 1 (powered) sailplanes: DG-100G, DG-100G ELAN, DG-200, DG-200/17, DG-200/17 C, DG-300, DG-300 ELAN, DG-300 Club ELAN, DG-300 ELAN ACRO, DG-300 Club ELAN ACRO and DG-400.

Group 2 (powered) sailplanes: DG-600, DG-600/18, DG-600M, DG-600-18 M, DG-500/22 ELAN, DG-500 ELAN Trainer, DG-500/20 ELAN, DG-500 ELAN ORION, DG-500 M, DG-500 MB, DG-800 A, DG-800 B, DG-808C, DG-800 LA, DG-800 S, DG-808 S, DG-1000S, DG-1000T, DG-1000M and DG-1001E.

Reason:

An occurrence was reported of a broken rod end at the upper end of the elevator pushrod in the fin of a DG-300 sailplane. It was found that the elevator play adjustment screw was screwed in too far, which caused jamming of the roller inside the funnel. Even with increased force, the roller could not be moved up to the front of the funnel. Therefore, each time, when rigging and during normal operation, a bending force acted on the rod end, which caused fatigue failure of the rod end. Due to similarity of design, all DG sailplanes listed in the applicability of this AD (if equipped with automatic hook-up) might be affected by this potential unsafe condition.

This condition, if not detected and corrected, could lead to loss of pitch control of the (powered) sailplane.

To address this potential unsafe condition, DG Aviation issued the TN, to provide inspection and replacement instructions of affected parts, and issued revision of applicable Maintenance Manuals (AMM).

For the reason described above, this AD requires a one-time operational check of the automatic elevator hook-up, and, depending on findings, replacement of the affected parts, and mandatory replacement of rod end for Group 1 (powered) sailplanes. This AD also requires to follow the revised AMM tasks.



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

Required as indicated by this AD, unless the action(s) required by this AD have been already accomplished:

Operational Check:

- (1) For Group 1 and 2 (powered) sailplanes: Within 3 months after the effective date of this AD, accomplish an operational check of the free play adjustment of the automatic elevator hook-up in accordance with the instructions of the applicable TN.

Part(s) Replacement:

- (2) For Group 1 (powered) sailplanes: Before next flight after the operational check as required by paragraph (1) of this AD, replace the elevator rod end with a new one (never installed on any aircraft).

Corrective Action(s):

- (3) For Group 1 (powered) sailplanes: If, during the operational check as required by paragraph (1) of this AD any discrepancies, as described in the TN, are detected, before next flight, replace the elevator roller with a new one and adjust free play in accordance with the instructions of the TN.
- (4) For Group 2 (powered) sailplanes: If, during the operational check as required by paragraph (1) of this AD any discrepancies, as described in the TN, are detected, before next flight, replace the elevator rod and/or elevator roller with new ones, as applicable, and adjust free play in accordance with the instructions of the TN.

Additional Maintenance Requirements:

- (5) For Group 1 and Group 2 (powered) sailplanes: After accomplishment of the operational check, as required by paragraph (1) of this AD, it is allowed to adjust the elevator control circuit free play provided it is accomplished in accordance with the applicable AMM instructions dated December 2023 or later.

Ref. Publications:

DG Aviation TN DG-SS-09, issue 01.f dated 05 March 2024.

DG Aviation TN DG-500/17, issue 01.c dated 05 March 2024.

DG Aviation TN 800/50, issue 01.c dated 05 March 2024.

DG Aviation TN 1000/50, issue 01.c, dated 04 March 2024.

The use of later approved revisions of the above-mentioned documents is acceptable for compliance with the requirements of this AD.

Remarks:

1. This Proposed AD will be closed for consultation on 13 May 2024.



2. Enquiries regarding this PAD should be referred to the EASA Safety Information Section, Certification Directorate. E-mail: ADs@easa.europa.eu.
3. Information about any failures, malfunctions, defects or other occurrences, which may be similar to the unsafe condition addressed by this PAD, and which may occur, or have occurred on a product, part or appliance not affected by this PAD, 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 PAD 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.
4. For any question concerning the technical content of the requirements in this PAD, please contact: DG Aviation GmbH, Otto Lilienthal Weg 2, 76646 Bruchsal, Germany.
Email: info@dg-aviation.de

