



Airworthiness Directive

AD No.: 2024-0126

Issued: 02 July 2024

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:

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: 16 July 2024

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-1000E 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 No. 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-1000E.

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 higher 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.

Further investigation showed that significant number of the Group 1 sailplanes has been operated with the elevator play adjustment screw screwed in too far.

It was also determined that the elevator pushrod end damage, because of its location on a thread, at this time there is no evidence that visual or non-destructive testing can confirm or exclude fatigue crack(s).

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

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.

To address this potential unsafe condition, DG Aviation issued the TN, to provide inspection and replacement instructions of affected parts, and issued revisions of the 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 following 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 Group 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: Within 3 months after the effective date 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. If requested and appropriately substantiated, EASA can approve Alternative Methods of Compliance for this AD.
2. This AD was posted on 15 April 2024 as PAD 24-044 for consultation until 13 May 2024. 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: DG Aviation GmbH, Otto Lilienthal Weg 2, 76646 Bruchsal, Germany.
Email: info@dg-aviation.de

