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Service bulletin

No.: G304MS – 12b)
G304 S – 12b)
G304eS – 12b)

Type:	Type Certificate No.: EASA.A.030 Model: Glasfügel 304 MS, 304 S, 304eS
Subject:	Elevator control rod in vertical stabilizer P/N: 304S-46-12.
Urgency 1:	Serial No.: 1-S; 2-S; 3-S; 4-S; 5-S; 6-S; 7-S; 8-S; 10-S; 11-S; 12-S; 14-S; 15-MS; 16-MS; 17-MS; 18-MS; 19-MS; 20-MS; 21-MS; 22-MS; 23-MS; 24-MS; 25-MS; 26-MS; 27-S; 29-MS; 30-MS **Action 1, specified s/n:** Inspection of elevator control rod "Inspection 1 (Pull test)": Within 3 days of publication. "Inspection 2 (Drainage hole inspection)": Within 30 days of publication. "Inspection 3 (Borescope inspection) Within 2 months of publication and then repetitive every 12 months if no drainage hole present. **Action 2, specified s/n:** Replacement of elevator control rod, if "Inspection 1" with negative result (if different readings are obtained between measurements before and after the pull test), before next flight. **Action 3, specified s/n:** Replacement of elevator control rod, If both "Inspection 2" and "Inspection 3" have negative result (no drainage hole present and corrosion found), within 1 month of Inspection 3. **Action 4, specified s/n:** Replacement or modification of elevator control rod, if no drainage hole present and no corrosion damage found, not later than December 31st 2022.
Urgency 2:	Serial No.: all Replacement of maintenance manual with: Technical Description, Operating, Maintenance and Repair Manual for the Sailplane Glasflügel 304S, doc. no.: 304S/MM; issued 09/21 not later than December 31st 2021.
Reason	Based on information from service. Corrosion of control rod, possible breakage of elevator control rod. Under unfavourable circumstances water could soak in the elevator control rod and cause corrosion. This could lead to breakage of the control rod.

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Datum 05.10.2021
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Issued by
Jaroslav Potměšil

Action 1: **“Inspection 1” of elevator control rod (Pull test)**

a) Install horizontal stabilizer, check elevator deflection in accordance with Table1. Note readings. Remove horizontal stabilizer.
b) With horizontal stabilizer removed, lock elevator control lever on top of vertical stabilizer by using a steel rod or tube (Ø12 to 16 mm – 0.47 to 0.63 in.) in the „lever-up “-position (control stick fwd.) (see Fig 1)
CAUTION: Extreme care should be used that the rod is correctly installed on both top edges of the vertical stabilizer to avoid damage to stabilizer structure.
c) By using a spring scale, apply a force of 150 N for minimum10 seconds to the stick in aft direction. Position the scale at middle of the hand grip. (see Fig 2)
d) After removal of locking rod, install horizontal stabilizer. Check elevator deflection i.e., Table 1. Positive result means identical readings between measurements. In case of different readings between measurements before and after the pull-test, Action 2 must be carried out before next flight.

Fig. 1

Fig. 2

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Action 1: **"Inspection 2" of elevator control rod drainage hole**

Inspect the presence of drainage hole at the bottom fork:

a) Remove tail wheel. Made inspection hole of diameter 12mm through the fender at position 105 mm from the front edge of the fender (see Fig 3) extend the opening (if necessary!) up to cca 60x50 mm. Check presence of the drainage hole at the bottom of the elevator control rod through the control hole (see Fig 4) and check throughput of the drainage hole using steel bar of diameter 1.5 mm (Fig. 5). Seal the inspection hole using adhesive folie.

Alternatively:

b) Using borescope through the upper thread hole visually check presence of the drainage hole at the bottom of the elevator control rod and visually check throughput of the drainage hole. Camera limitation – max. diameter 6.5 mm, min. length 1.2 m.

If no drainage hole is present continue with Inspection 3.

Fig. 3

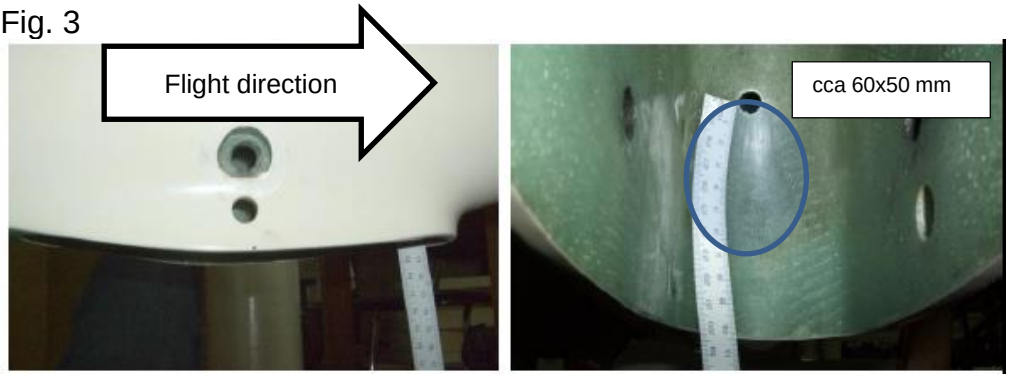
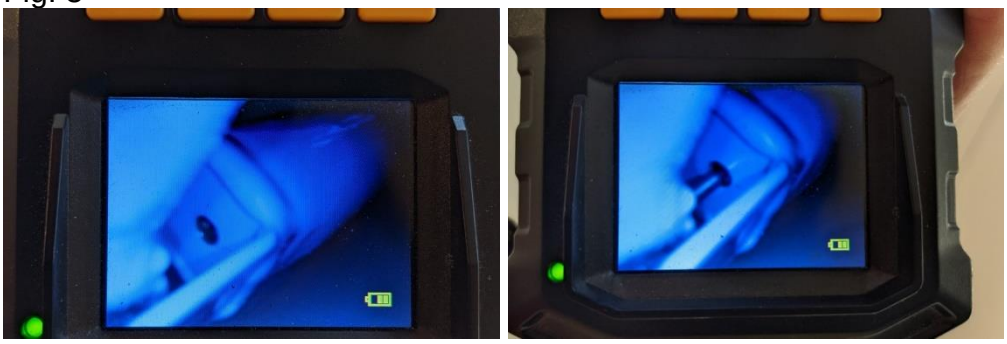


Fig. 4

Action 1:

Fig. 5



“Inspection 3” of elevator control rod inner area
If no drainage hole at the bottom fork is found, inspect the internal area of the elevator pushrod for corrosion through the upper threaded hole. Positive result means no structural damage resulting from corrosion inside the pushrod. Camera limitation – max. diameter 6.5 mm, min. length 1.2 m.

Action 2,3: Replace elevator control rod in accordance with AMM instructions.

Action 4: Replace elevator rod in accordance with AMM instructions or drill the opening of diameter 3 mm at lower fork base of the elevator pushrod. Apply cavity wax coating inside the pushrod through the thread hole. Seal the upper check hole using shrink tube.
Trim the rubber sealing at upper vertical tail rib to prevent water accumulation – the inner diameter of the sealing member should be bigger than outer diameter of the pushrod.

Note: Replacement and modification of control rod (Action 2 to 4) must be carried out by an authorized maintenance staff.

Material : All materials and instructions for replacement or modification of control rod must be obtained exclusively through:

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Other material according to the repair manual specification (glass fabric, resin system) and market specification (cavity wax).

Weight : N/A
C.G. Position : N/A

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Remarks :	Installation of new elevator control rod with drainage hole terminates repetitive 12-month inspection. Modification of elevator control rod according to Action 4 terminates repetitive 12-month inspection. All maintenance work must be carried out and certified by qualified and authorized personal. Exemptions are: - Inspections and maintenance tasks, which are described in the Flight and Service Manual - Works to be carried out by pilot/owner, in accordance with the approved -individual maintenance program. (Pilot/Owner Maintenance) - Maintenance tasks, out of the maintenance documentation, if clearly designated „to be carried out by pilot/owner “. Certification of maintenance: All maintenance has to be certified in the aircraft log book before next flight by an authorized maintenance staff as „release to service “. This also applies to inspections or single inspection tasks based on TN/AD etc. Note: Possible existing national regulations of the state of registry of the sailplane have always to be applied accordingly. Owner covers expenses of the action.
Table 1	Elevator deflections (all affected models): Deflection „up“ 18° Deflection „down“ 18° Tolerance ±2°

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