



GFA AIRWORTHINESS DIRECTIVE

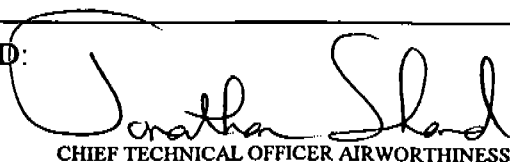
- TYPE AFFECTED:** Stemme S10 Serial Numbers 10-03 to 10-63
Stemme S10-V Serial Numbers 14-002 to 14-026 and transformed aircraft 14-012M to 14-063M.
- SUBJECT:** Cracking of the rear horizontal stabiliser mount.
- BACKGROUND:** Overseas experience has shown that cracks may occur in the rear tailplane mounts.
- DOCUMENTATION:** Stemme S10 Service Bulletin A31-10-022 which forms part of this AD. Note that only pages 4 through 6 have been included as pages 1 through 3 are the German language version.
- ACTION REQUIRED:**
1. Before next flight the rear tailplane mount must be inspected for cracks in accordance with item 5.1 of Service Bulletin A31-10-022.

If no cracks are found then the part may remain in service subject to inspections at every annual and 100 hourly inspection.

If a crack over 7 mm in length is found the part must be replaced before next flight.

If a crack under 7 mm in length is found then the aircraft may be ferried for the purposes of replacing the fitting. Passengers may not be carried during these flights.
 2. Repair of the fitting must be carried out in accordance with section 5.2 of Service Bulletin A31-10-022.
 3. The Maintenance Manual must be updated in accordance with section 5.3 of the Service Bulletin. Pages must be obtained from Stemme GmbH & Co. KG.
- WEIGHT AND BALANCE:** Not affected
- IMPLEMENTATION:** Inspection for cracks and replacement of the fittings may be performed by persons rated for Annual Inspections any type.

SIGNED:


CHIEF TECHNICAL OFFICER AIRWORTHINESS

For and on behalf of:

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OF AUSTRALIA

Amendment of the manual may be performed by the Certificate Holder.

COMPLIANCE:

The requirements of this GFA Airworthiness Directive are mandatory. This Directive is issued pursuant to the Rules and Regulations of the Gliding Federation of Australia.

RECEIVED 14 JUL 1998

STEMME GmbH & Co. KG Design Org. No. EB 11	Service Bulletin		Document number:
	- Cracks in rear Horizontal Stabilizer Fitting -		A31-10-022
			Am-Index: 01.d Page 4 (of 6)

This Service Bulletin provides from page 1 to 3 the original version in German, approved by the Luftfahrt-Bundesamt, and from page 4 to 6 a translated version in English.

1. Subject:

Cracks in rear Horizontal Stabilizer Fitting / Project No.: 10-279

2. Affected aircraft models:

Powered sailplane models STEMME S10 and S10-V / LBA Type Certificate Data Sheet no. 846

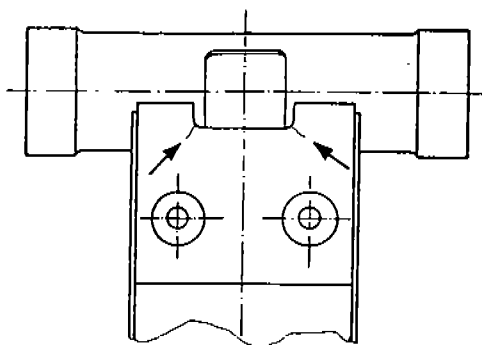
- S/Ns model S10: 10-03 to 10-63
- S/Ns model S10-V: 14-002 to 14-026 and transformed A/C 14-012M to 14-063M

3. Time of compliance:

- Inspection: before the next flight.
- Parts substitution: immediately, if finding positive - flight to FBO permissible if crack length below 7 mm.

4. Reason:

Cracks were detected in some S/Ns of the Type in the rear fitting of the horizontal stabilizer (HS). It is believed that they were caused by internal residual stress after welding, superimposed by operational loads. Cracks developed after long periods of operation compounded by non-optimal component design.



5. Instructions:

5.1 Inspection

The presence of cracks and their extent must be ascertained previous to the next flight. Any part with a crack length of 7 mm or over, detected using a five-fold magnifying glass must be replaced previous to the next flight.

If no crack is ascertained, checks must be repeatedly performed during the following periodical inspections (100 h and Annual Inspection) and components must then be replaced if necessary.

If a crack length of less than 7 mm is ascertained using a magnifying glass, a flight to the FBO that is authorized to perform the repair is permissible.

prepared:	Sign	checked:	Sign	Date:	Supersedes issue of:
Dalldorff	<i>Dalldorff</i>	Freudenberger	<i>Freudenberger</i>	16.08. 1998	

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6. Mass and balance:

Not affected.

7. Material:

The casing of the HS fitting may be obtained from the manufacturer, STEMME GmbH & Co. KG under the Part No. 10LS-HHA. Apart from the casing, only new self-lock nuts and tab washers (if necessary) are needed for the repair.

If the complete pair of fittings is to be exchanged, both components may be ordered under Part Nos. 10LS-HH for the fuselage sided and 10HR-G for the elevator sided fitting.

8. Necessary documents:

The following documentation which is necessary for the exchange of the casing, respectively for verification, is included on delivery:

No.	Doc. No.	Kind of Document	Document Title
1	A12-10LS-HH	Assy. Drawing	HS Fitting, rear
2	A20-10LS-HH	Bill of material	HS Fitting, rear

9. Accomplishment and log entry:

Any inspection is to be performed by an appropriately licensed inspector and the result is to be entered in the Aircraft's Log.

The repair may be performed by a competent person but must then be checked and entered in the Aircraft's Log by an appropriately licensed inspector.

Attention is to be paid to the national Regulations governing the keeping of Service Records.

10. Remarks:

This Service Bulletin will be sent to every last Aircraft Operator of the S/Ns affected known to the manufacturer. If ownership has changed and the new Aircraft Operator cannot be reached in this way, information as to the name and address of the new Aircraft Operator is requested immediately.

Stemme GmbH & Co. KG - Airworthiness Department

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5.2 Repair:

As the fuselage- and elevator-sided fitting components are produced in pairs, both parts should either be replaced together or the casing of the fuselage-sided fitting should be replaced solely (utilizing its component parts, i.e. axle, bearings etc.). Otherwise problems concerning fitting of pins and bushings are to be expected.

Attention: Welding damaged casings is not permitted!

Only new casings that have been optimized regarding design, material and heat treatment may be used during repair.

The following steps should be taken to exchange the casing: Remove the pin 10LS-HH05 on one side. Remove bolt M5x40 from the center of the casing and press out bushing 10LS-HH06. Press out axle 10LS-HH04. Remove bearing 10LS-HH09 from the opposite side. Press bearing into the new casing and ensure that it has reached the base. Further installation to be carried out in the reverse order.

Care should be taken to use only new self-locking nuts during assembly work on the fuselage. If also the elevator-sided fitting shall be exchanged the attachment bolts to the elevator-halves are to be secured by new tab washers. All affected bolt attachments should be marked with safety sealant after tightening.

5.3 Modifications to the Manuals:

The following modifications to the manuals necessitate the exchange of relevant pages. Changes and corrections should be made according to methods prescribed in Service Bulletin A31-10-008. The amendment numbers are:

	Flight Manual	Maintenance Manual
S10	Amendment -	Amendment 8
S10-V	Amendment -	Amendment 4

5.3.1 Maintenance Manual:

Page	Description of Modification
S10	
S10-V	
2*	Inventory of this amendment; textual corrections
3*	List of effective pages updated; textual supplements
4	Changes in the index
26*	Items "Fin/Rudder" and "Tailplane/Elevator" combined to "Empennage"; more precise instructions for the examination of the elevator fitting; supplemented by 100 h check; new heading and page numbering. Further minor addenda and corrections.
29 to 29 (US: 30)	

* The following precautions should be taken concerning older aircraft:

- S10 up to SN 10-63: page 26 is to be inserted in a version that contains amendment No. 8 exclusively. Pages 2 and 3 are therefore supplied in a version that only includes amendment 2 and 8 (USA: 2, 3, 4 and 8). If further amendments are contained in the Manual, the relevant entries on pages 2 and 3 by hand.
- S10-V up to SN 14-003; pages iii, iv and 5-3 are to be included in a version that exclusively contains amendment No. 1 and 4.
- S10-V (transformed aircraft) up to SN 14-056M: pages iii, iv and 5-3 are to be inserted in a version that exclusively contains amendment No. 4. If equipped with flap roller spring according to Service Bulletin A31-10-015, the version containing amendment Nos. 1 and 4 are to be included.
- All further pages are to be inserted as described above.

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