



GFA AIRWORTHINESS DIRECTIVE

TYPE AFFECTED: Stemme powered sailplanes fitted with drive shafts supplied by MAN Technologies AG, as follows:

S-10, serial numbers 10-08 and 10-13

S-10V, serial numbers 14-003, 14-004, 14-007, 14-014, 14-015 and 14-018 to 14-030, as well as converted aircraft serial numbers 14-028M, 14-036M and 14-038M

S-10VT, serial numbers 11-001 to 11-055, 11-057, 11-058 and 11-060 to 11-066.

SUBJECT: Inspection of the metal flanges on both ends of the drive shafts.

BACKGROUND: There have been two failures of drive shafts supplied by the MAN company, where the metal flanges have started to rotate within the CFRP tube, due to the possibility of improper bonding.

DOCUMENTATION: Luftfahrt-Bundesamt (LBA) Airworthiness Directive No 2002-113 and Stemme Service Bulletin No A31-10-058 Amendment Index 01a form part of this AD.

ACTION REQUIRED: Affected shafts must be removed from the aircraft and shipped to the service department of the Stemme factory for inspection in accordance with the above-mentioned Service Bulletin. Contact details will be found in the attached documentation.

Removal and refitting of drive shafts before and after shipment shall be carried out only by persons specifically approved by the CTO/A.

WEIGHT AND BALANCE: Not affected.

IMPLEMENTATION: Before further flight.

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.

SIGNED:

SENIOR TECHNICAL OFFICER AIRWORTHINESS

For and on behalf of:

THE GLIDING FEDERATION
OF AUSTRALIA



**Airworthiness
Directive
2002-113**

Luftfahrt-Bundesamt
Airworthiness Directive Section
Hermann-Blenk-Str. 26
38108 Braunschweig
Federal Republic of Germany

Stemme

Effective Date: May 02, 2002

Affected:

Kind of aeronautical product:	Powered Sailplane
Manufacturer:	Stemme, Strausberg, Germany
Type:	Stemme S 10
Models affected:	all
Serial numbers affected:	all, equipped with MAN drive shaft
German Type Certificate No.:	846

Subject:

MAN drive shafts, one time inspection of the metal flanges on both ends of the drive shaft

Reason:

There is a suspicion that the metal flanges on both ends of the drive shaft might not be properly glued to the CFRP-tube. Two drive shafts have already failed during normal operation of the aircraft, whereby the flange of the drive shaft started to rotate within the CFRP-tube, while the drive shaft still appeared to be intact when looked at it from outside. It is not possible to certainty that other incorrectly manufactured drive shafts might exist and fail as well.

Action:

The drive shaft has to be demounted and shipped to the service department of STEMME AG for checking. Action to be accomplished in accordance with the Technical Notes of the manufacturer.

Compliance:

If not already has been done: action has to be accomplished within 4 weeks.

Technical publication of the manufacturer:

STEMME Service Bulletin No. A31-10-058 Amendment Index 01.a dated November 08, 2001 which becomes herewith part of this AD and may be obtained from Messrs.:

STEMME AG
Flugplatzstraße F 2, Nr. 7
D-15344 Strausberg
Federal Republic of Germany
Tel.: + 49.33 41 / 36 12 - 0 Fax: + 49.33 41 / 36 12 - 30
Mail: mpl_stemme@stemme.de

Holders of affected aircraft registered in Germany have to observe the following:

Action has to be accomplished by the owner of the aircraft or an approved service station and to be checked and entered in the log book by a licensed inspector.

As a result of the a.m. deficiencies, the airworthiness of the aircraft is affected to such an extent that after the expiry of the a.m. dates the aircraft may be operated only after proper accomplishment of the prescribed actions. In the interest of aviation safety outweighing the interest of the receiver in a postponement of the prescribed actions, the immediate compliance with this AD is to be directed.

An appeal to this notice may be raised within a period of one month following notification. Appeals are to be raised with the Luftfahrt-Bundesamt, Hermann-Blenk-Str. 26, 38108 Braunschweig, in writing or for the purpose of drawing up minutes.

Enquiries regarding this Airworthiness Directive should be referred to Mr.Olaf Schneider, Airworthiness Directive Section at the above address, fax-no. 0049 531/2355-720. Please note, that in case of any difficulty, reference should be made to the German issue!

STEMME F & D DOA LBA.NSD.005	Service Bulletin	Document Number: A31-10-058
	Check of MAN drive shafts	Am.-Index: 01.a Page: 3 of 4

This Service Bulletin provides from page 1 to 2 the original version in German, approved by the Luftfahrt-Bundesamt, and from page 3 to 4 a translated version in English. The translation has been performed to the best of our knowledge and judgement.

1 Subject:

Single nonrecurrent check of all delivered drive shafts, part number 10AS-W, manufactured by MAN Technologies AG (for identification see corresponding JAA Form One or the type placard on the drive shaft).

2 Affected Powered Sailplane:

Type STEMME S10, all models (S10, S10-V and S10-VT)
LBA Type Certificate No. 846, FAA Type Certificate: G58EU and G06CE.

All serial numbers equipped with MAN drive shafts are affected. According to our knowledge these are:

- S10-VT: S/N 11-001 through 11-055, 11-057 through 11-058, and 11-060 through 11-066.
- S10-V: S/N 14-003, 14-004, 14-007, 14-014, 14-015, and 14-018 through 14-030, as well as conversion S/N 14-028M, 14-036M, and 14-038M.
- S10: 10-08 and 10-13

3 Time of compliance:

The prescribed measures have to be accomplished until January 31, 2002.

4 Background Information:

There is a suspicion that the metal flanges on both ends of the drive shaft might not be properly glued to the CFRP-tube (CFRP = carbon fibre reinforced plastics). Two drive shafts have already failed during normal operation of the aircraft, whereby the flange of the drive shaft started to rotate within the CFRP-tube, while the drive shaft still appeared to be intact when looked at it from outside.

It is not possible to certainly exclude that other incorrectly manufactured drive shafts might exist and fail as well.

5 Measures:

This service bulletin prescribes a single nonrecurrent check of the drive shaft. The drive shaft has to be de-mounted and shipped to the service department of STEMME AG for checking. Its Component History Card and information about the current operating times (TSN, TSO) must be included.

The check described above is in principle an extended 400h-check (TBO), and consequently the operating time of the drive shaft since last scheduled overhaul (TSO) will be reset to zero, presuming that the drive shaft passes the check successfully. A corresponding document (Form 1) will be delivered with the checked drive shaft.

Remark: After a first visual inspection the drive shaft will be loaded with a torsional moment in order to identify incorrectly glued drive shafts. The test load is higher than the load to be applied during the normal scheduled inspection (400h-overhaul) and the maximum loads expected in operation, but it is still much lower than the rated breakage load. Drive shaft that successfully pass the test can be further used, others must be replaced.

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6 Modifications to the Manuals:

none

7 Mass and balance:

not affected

8 Special Tools and Materials:

none

9 Associated documents:

Maintenance Manual of the respective model.

10 Accomplishment and log entry:

The measures specified by section 5 of this service bulletin must be carried out by STEMME AG. The de-mounting and mounting of the drive shaft must be checked and entered in the airplane's log book by a li-censed inspector. The regulations on the keeping of service records must be adhered to.

(End)