



GFA AD 511
(ISSUE 4)

GFA AIRWORTHINESS DIRECTIVE

- TYPE AFFECTED:** Stemme powered sailplanes of the following models and serial numbers, fitted with propellers 10AP-V and 11AP-V/Project No 14-006:
- S-10V: serial numbers 14-001 to 14-030 and 14-012M to 14-063M
S-10VT: serial numbers 11-001 to 11-037,
- SUBJECT:**
1. Replacement of the propeller fork P/N 10AP-V08 with new fork P/N 10AP-V88 on all aircraft with propellers 10AP-V and 11AP-V.
 2. Modification of the gearbox suspension of propeller 10AP-V and spacer tubes of the suspension.
 3. Performing extra dynamic propeller balancing.
- BACKGROUND:** Fracture of the propeller fork at the end of its threaded fastening pin, possibly caused by a previous ground-strike, has resulted in the loss of one propeller blade in flight
- DOCUMENTATION:** Luftfahrt-Bundesamt (LBA) Airworthiness Directive No 1999-224/5 and pages 1, 4 and 5 of Stemme Technical Bulletin No A31-10-001 (as amended and approved by the LBA) form part of this AD. **Note:** Pages 2 and 3 of the Stemme Technical Bulletin have not been included, as they are German-language versions of pages 4 and 5.
- ACTION REQUIRED:** Carry out actions in accordance with the LBA AD and Stemme TB.
- WEIGHT AND BALANCE:** Not Affected.
- IMPLEMENTATION:** Before further flight. Work to be carried out by a person authorized for engine/propeller overhaul work on this engine/propeller combination. One ferry flight is permitted for having this work carried out - see note under "Compliance" in LBA AD.
- 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:



CHIEF TECHNICAL OFFICER AIRWORTHINESS

For and on behalf of:

THE GLIDING FEDERATION
OF AUSTRALIA



**Airworthiness
Directive
1999-224/5**

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

Stemme

Effective Date: March 22, 2001

Affected:

Kind of aeronautical product:	Powered Sailplanes
Manufacturer:	Stemme, Berlin, Germany
Type:	Stemme S 10
Models affected:	Stemme S 10-V and -VT
Serial numbers affected:	S10-V: 14-001 up to 14-030 and 14-012M up to 14-063M S10-VT: 11-001 up to 11-037
German Type Certificate No.:	846

Subject:

Variable Pitch Propeller – Propeller fork 10AP-V08 of propellers 10AP-V and 11AP-V / Project-No. 14-006

Reason:

Loss of one propeller blade including propeller fork during flight operation due to a fracture of the propeller fork at the end of its threaded fastening pin.

That fracture of the propeller fork may be caused by the stress which occurred during a ground contact of the propeller or a similar incident such as impact stop.

Putting out of operation of the propeller forks P/N 10AP-V08 on the occasion of the conversion of the propellers 10AP-V and 11AP-V to the design with the new forks P/N 10AP-V88.

Action:

The propellers 10AP-V and 11AP-V must be converted to the design with the new forks P/N 10AP-V88 (for both propellers).

Modification of the gearbox suspensions of the propeller 10AP-V and spacer tubes of the gearbox suspensions. Perform an extra dynamic propeller balancing.

Note:

With publication of this Airworthiness Directive the requirement for revision of the appropriate service manual mentioned concerning the permissible operating times under the item 7 "Associated Documents" is no longer required.

The Technical Bulletin No. A31-10-001 as amended and approved by the LBA is to be applied.

Compliance:

The actions must be done before the next flight, if not already has been done.

Note:

For the purpose of the accomplishment of this AD one (1) ferry flight will be permitted; for this ferry flight the following conditions have to be met:

1. Proper condition and unrestricted functioning of the components concerned.
2. The ferry flight may be conducted only under visual flight conditions and with the minimum flight crew required for this flight.
3. Passengers, company staff members not required to conduct the flight and goods may not be carried.
4. The aircraft may not be flown over congested areas and assemblies of persons.
5. Prior to the flight, the pilot is to be informed about this exemption.
6. The conduct of the ferry flight is to be reported in writing to the Luftfahrt-Bundesamt stating a) the name of the pilot, b) the date of the flight, c) the time of departure and arrival and the AD number.

Technical publication of the manufacturer:

Stemme Service Bulletin No. A 31-10-051, Amendment-Index 05.c dated December 15, 1999 which becomes herewith part of this AD and may be obtained from Messrs.

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 GmbH & Co. KG
Flugplatzstraße 2, Nr. 7

D-15344 Strausberg
Federal Republic of Germany

Accomplishment and log book entry:

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

Note:

This AD supersedes the AD-No. 1999-224/4 dated December 10, 1999.

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

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

Instructions about Available Legal Remedies:

An appeal to this notice may be raised within a period of one month following notification. Appeals must be submitted in writing or registered at the Luftfahrt-Bundesamt, Hermann-Blenk-Str. 26, 38108 Braunschweig.

STEMME F & D Design Org.	Technische Mitteilung / Service Bulletin	Document number: A31-10-001
	Übersicht der zulässigen Betriebszeiten <i>Review of Permissible Operating Times</i>	Änd.-/Am.-Index 06.c Seite/page: 1 of 5

1 Gegenstand / Subject:

Übersicht der zulässigen Betriebszeiten aller laufzeitbeschränkten Teile.

Review of Permissible Operating Times of all parts subject to service life limitations.

2 Betroffene Motorsegler / Affected powered sailplane:

Motorsegler des Musters STEMME S10, alle Baureihen / Kennblatt Nr. 846 (LBA); G58EU und G06CE (FAA).
Werknummern: alle

Powered sailplane type STEMME S10, all models / TC no. 846 (LBA); G58EU and G06CE (FAA).
S/N s: all

3 Dringlichkeit / Time of compliance:

Ohne. / None.

4 Vorgang, Anlaß / Background information:

Neue zulässige Betriebszeiten für Verstellpropeller der Baureihen S10-V und S10-VT.

New permissible operating times for variable pitch propeller of models S10-V and S10-VT.

5 Maßnahmen / Measures:

Änderungen in den Wartungshandbüchern S10-V und S10-VT /
Modifications to the Manuals S10-v and S10-VT:

Folgende Wartungshandbücher S10-V sind von der Änderung betroffen:
The following maintenance manuals S10-V are affected by the modification:

Dok. Nr. / Doc. No.	Sprache / Language	Ausgabe / Issue	betroffene Seiten / affected pages:
A40-10-120	deutsch	06.09.1994	iii, iv, 4-1, 4-2
A40-10-121	englisch (JAA-Ausgabe)	06.09.1994	iii, iv, 4-1...3
A40-10-122	englisch (FAA-Ausgabe)	06.09.1994	iii, iv, 4-1...3

Die Berichtigung dieser S10-V Handbücher wird einheitlich mit „Berichtigung Nr. 08 vom 06.12.2000“ gekennzeichnet.
The corrections to these S10-V manuals are uniformly referred to as "Amendment No. 08, Date: 06.12.2000".

Folgende Wartungshandbücher S10-VT sind von der Änderung betroffen:
The following maintenance manuals S10-VT are affected by the modification:

Dok. Nr. / Doc. No.	Sprache / Language	Ausgabe / Issue	betroffene Seiten / affected pages:
A40-11-120	deutsch / German	01.01.1998	ii, iv, v, 4-1, 4-2
A40-11-121	English (JAA-version)	01.01.1998	ii, iv, v, 4-1...3
A40-11-122	English (FAA-version)	19.12.1997	ii, iv, v, 4-1...3

Die Berichtigung dieser S10-VT Handbücher wird einheitlich mit „Berichtigung Nr. 09 vom 06.12.2000“ gekennzeichnet.
The corrections to these S10-VT manuals are uniformly referred to as "Amendment No. 09, Date: 06.12.2000".

6 Remarks:

The English translation of this document has been done by best knowledge and judgment.

erstellt: <i>prepared by:</i>	Kurzzeichen <i>Signed</i>	MPL geprüft: <i>checked by airworthiness dept.</i>	Kurzzeichen <i>Signed</i>	Datum: <i>Date:</i>	Ersetzt Ausgabe 06.b vom <i>Supersedes issue 06.b, dated:</i>	LBA anerkannt <i>LBA approved</i>	Datum: <i>Date:</i>
Ellwanger		Dalldorff		09.02.2001	26.01.2001		

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Review of Permissible Operating Times:

No.	Model			Part/Assembly/ Equipment	Manufacturer, Type	Part No. (STEMME)	Permissible op. time by		NOTES
	S10	S10-V	S10-VT				Overhaul (TBO)	Replacement	
1	X	X	X	Airframe (Composite structure)	STEMME	sundry	6000 h	6000 h	(1)
2	X	X		Limbach Engine	Limbach L 2400 EB 1.D L 2400 EB 1.AD	10AM-MOL			(2)
3	X	X		Magneto for Limbach	Slick 4230	(from Limbach)			(2)
4			X	Rotax Engine	ROTAX 914 F2/S1	11AM-M	1000 h (10 years)		(8)
5	X			Propeller (fixed pitch)	STEMME	10AP-N	400 h		(3)(4)
6	X			Lateral parts	STEMME	10AP-N01 10AP-N11		1000h	(4)
7		X		Variable pitch propeller	STEMME	10AP-V	150 h (3 years)		(3)(4)
8			X	Variable pitch propeller	STEMME	11AP-V	150 h (3 years)		(3)(4)
9		X	X	Propeller hub	STEMME	10AP-V01		2000 h	(4)
10		X	X	Propeller fork and its fastening	STEMME	10AP-V88 -V77, -V78, -VU		150 h	(3)(4)
11	X	X		Reduction Gear (vee-belts)	STEMME	10AG	400 h		(3)(4)
12			X	Reduction Gear (cog wheels)	STEMME	11AG	1000 h		(3)(4)
13	X			Gear suspension	STEMME	10AA	1000 h		(4)
14		X		Gear suspension	STEMME	14AA	150h		(3)(4)
15			X	Gear suspension	STEMME	11AA	1000h (5 years)		(3)(4)
16	X	X		Flywheel clutch (2 flyweights)	STEMME	10AK	400 h		(3)(4)
17			X	Flywheel clutch (3 flyweights)	STEMME	11AK	400 h		(3)(4)
18	X	X		Driveshaft	Ciba-Geigy (without P/N ref.)	10AS	400 h		(3)(4)(9)
19	X	X	X	Driveshaft	Glaenger-Spicer 19.01.01.xxx	10AS	400 h		(3)(4)(9)
20	X	X	X	Driveshaft	MAN Techn. AG 95.0700.00.000	10AS	400 h		(3)(4)(9)
21			X	rubber parts of the engine	Rotax	sundry		5 years	(7)
22	X	X	X	Rubber parts of the gear suspension	STEMME	sundry		12 years	
23	X	X		Rubber parts of the clutch	STEMME	10AS-43 10AS-48		12 years	
24	X	X		flexible disk of the drive shaft system	STEMME	10AS-09		12 years	
25			X	flexible disk of the drive shaft system	STEMME	11AS-09		12 years	
26	X	X		Fuel Hoses	STEMME	10AB-90	-	5 years	
27			X	Fuel Hoses	STEMME	11AB-M...	-	5 years	
28	X	X		Lubrication Hoses	STEMME	10AM-KÖS / -T	-	5 years	
29			X	Lubrication Hoses	STEMME	11AM-O...	-	5 years	
30			X	Coolant Hoses	STEMME	11AM-W...	-	5 years	
31	X	X	X	Brake Hoses	sundry	10FO-B06	-	5 years	(5)
32	X	X	X	Safety Harnesses	sundry	10C-08/-09	-	12 years	(6)
33	X	X	X	Control Rod Connectors	L'Hotellier	10M-098/-099			(2)

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On expiry of a part's permissible operating times the affected part has to be sent to the manufacturer for inspection. The manufacturer has to decide if further use is possible after the inspection, or if an replacement or overhaul or repair is necessary.

If the limitation is given in operating hours and in a calendar period (year), the first occurring case applies.

If further equipment subject to service life limitations is installed, the overhaul intervals and service life limits prescribed by the respective manufacturer must be observed. The item has to be entered in the form Review of Operating times.

NOTES:

- (1) Extension of service life exceeding 6000 h can be achieved only for individual airplanes after a comprehensive inspection of the airframe carried out by the manufacturer according to an approved program.
- (2) Please refer to the actual issue of the appropriate manufacturer's Service Bulletin, Maintenance Manuals or Instructions of the manufacturer must be strictly adhered to (for L'Hotellier Ball and Swivel Joints contained in the appendix to the Maintenance Manual).
- (3) The stated times are provisional within the TBO development program. Based on sufficient operating experience they may be further raised or reduced if necessary (extension of TBO and/or service life is intended) and will be notified by a new issue of this Service Bulletin.
- (4) The TBO expires in each case of:
 - impact stop (possible ground touch of the propeller);
 - Non-observance of the periodical inspections as they are fixed in the Maintenance Manual;
 - replacement of essential parts.

Damaging by ground contact, bird strike, stone strike or similar which require a „large repair“, the manufacturer decides which parts of the complete drive system are affected and if a repair may be practicable or if an overhaul or replacement have to be performed.

- (5) May be extended to 10 years, if they are in good condition.
- (6) Replacement required after heavy overloads (e.g. due to an accident); hereto refer also to the operating instructions of the manufacturer.
- (7) All rubber parts of the engine Rotax 914 F2/S1 must be renewed. Subject to this action are: the carburetor venting hoses, the air pressure hoses between airbox, carburetor float chambers, fuel pressure control and pressure sensor, the connecting hoses on the compensating tube, the four engine sided rubber hoses of the cooling system, and the rubber diaphragms on both carburetors.
- (8) For the STEMME supported model of the engine type Rotax 914, the TBO is established by this SB on the basis of that published by Rotax, and in general it will not differ. Overhaul of engines model Rotax 914 F2/S1 must be carried out by a workshop that is authorized by STEMME in accordance with Rotax.
- (9) The drive shaft cannot be overhauled. Instead of an overhaul it will be checked by a load test at STEMME.