BGA TECHNICAL COMMITTEE

TECHNICAL NEWSHEET (TNS) 11/12/94

PART 1 **AIRWORTHINESS "AGGRO"**

Please refer to the 1994 Red Pages. This is the last TNS in the 1994 series.

1.1. Libelle 201/201B Extention of service life to 12,000 hours. LBA AD 94-265, and Flight Manual amendment (herewith) requires inspection at 6000 hours to a specific schedule.

1.2. DG500 Elan Trainer LBA AD 94-295 and Tech Note 348/4T (herewith) restrict negative "G" manoeuvrers.

1.3. Discus bT - cracks in the engine mounting frame have been identified by Jim Tucker, Southdown G.C. (sketch herewith).

1.4. Grob G103 "Accros" - HQ Air Cadets have identified cracked pulleys in the front cockpit rudder assemblies. Inspect/replace as required.

1.5. Astir CS, CS777, CS Jeans - Cracked Elevator levers. Action is required as indicated in LBA A/D 94-317 copied herewith. Replace when parts become available.

1.6. Grob Astir's (Single & Twin). Service Bulletin 306-32 and 315-37 approve the use of WEDEKIND - SICHERUNG quick release connectors in place of L'Hotteliers (details herewith).

1.7. Grob Operations Manual for 2500cc engine. TM 4601-10 introduces a new issue, available from Grob

1.8. Grob 2500 Engines. TM 4601-8 (herewith) requires Inspection of Valve Seats.

1.9. Grob 2500 Engines. TM 4601-9 approves Champion REN 30S spark plugs.

1.10. Grob G.109 TM 817-38 introduces a damper in the rudder controls to eliminate flutter - details herewith. A/D 94-262 makes this Mandatory.

1.11. PA18 - PA25 Flap/Aileron Corrosion. Extract from GASIL explains the problem.

1.12. "Thirty Day" BGA Airworthiness Tickets may only be used to extend a valid C.of.A. after consultation with CTO, or to activate a glider after C.of.A. renewal inspection has been completed.

PART 2 **GENERAL MATTERS**

2.1. CAA Reporting Procedures for Incidents and Accidents are listed in the attached extract from GASIL - place on NOTICE BOARD!

2.2. BGA Inspector Renewals are now due if you want to remain "active" in 1995 - (£17.50) as soon as possible.

2.3. Club Technical Officers - please make these TNS's available to your members!

MERRY CHRISTMAS AND A HAPPY NEW YEAR

Dick Stratton
Chief Technical Officer

H. Streifeneder Glasfaser-Flugzeug-Service-GmbH Hofener Weg D-72582 Grabenstetten	**Technical Note** **No. 201-29**	Type Cetificate No. 251

Subject: Extension of service life

Affected: All serial numbers of sailplane model

Std. Libelle 201
Std. Libelle 201 B

Degree of priority: Before reaching a total service life of 6000 hours, however not later than October 1st, 1994.

Reason: The results of cycling loading tests carried out on wing spars justify the extension of the service life FRP-sailplanes and motorgliders to 12000 hours, provided that the airworthiness of each individual aircraft is evidenced by a special multi-stage inspection program carried out in compliance with supplementary instructions of the flight- and operations manual.

Actions: The flight- and operations manual is to be supplemented by page No. E 20 and E 21 titled

"Inspection procedures for extension of the service life"

and the table of contents on page No.2 is to be amended accordingly.

Remarks: Page No. E 20 and E 21 of the flight- and operations manual are available from:

H. Streifeneder
Glasfaser-Flugzeug-Service GmbH
Hofener Weg
D-72582 Grabenstetten
Federal Republic of Germany

The accomplishment of this technical note is to be entered into the aircraft log book by a licensed inspector.

11/94-265 [signature]

Grabenstetten, 21.04.1994

LBA approved

[signature] [stamp] [signature]

09. Juni 1994

Inspection Procedures for the extension of the service life

1.General

The results of cyclic loading tests subsequently carried out on wing spars justify the extension of the service life of FRP sailplanes and motorgliders to 12000 hours, provided that the airworthiness of each individual aircraft is evidenced once more by a special multi-stage inspection program under the aspect of the service life which exceeds the normal annual inspection.

2.Terms

When the sailplane has reached a service life of 6000 hours, an inspection is to be carried out following the inspection schedule as mentioned in section 4.

If the results of this inspection are positiv or after proper repair of the defects observed, the service life of the sailplane is extended by 1000 hours (fourth stage).

Once 7000 hours are reached, the inspection in accordance with the aforementioned schedule is to be repeated. If the results are positiv or after proper repair of defects observed the service life may be extended to 8000 hours (fifth stage).

This procedure is repeated until the sailplane reaches a service life of 12000 hours.
For a service life exceeding 12000 hours further regulations will be published in due time.

3.The relevant inspections are to be carried out by the service station in charge of Glasflügel sailplanes or by a certfied repair station.

4.For the case that an inspection is not carried out by the service station in charge, a current inspection schedule is to be requested from the repair station in charge of Glasflügel sailplanes

H. Streifeneder
Glasfaser-Flugzeug-Service GmbH
Hofener Weg
D-72582 Grabenstetten
Federal Republic of Germany

for each individual inspection. The inspection is to be carried out not any later than three months after the inspection schedule was issued.

5.The results of the inspection are to be entered into the inspection schedule step by step.
For the case that the inspection is not carried out by the repair station in charge, a copy of the completed inspection schedule must be supplied to the repair station in charge of Glasflügel sailplanes for evaluation.

6.Obligatory periodic inspections (like the F.R.G annual inspection according to § 27 (1) of the LuftGerPO) are not affected by this regulation.

Luftfahrt-Bundesamt
-AD-Department-

Airworthiness Directive

In case of any difficulty, reference should be made to the German original issue

94-295 Glaser-Dirks

Date of issue: 07. October 1994

Affected sailplanes:
German Type Certificate No.: 348

GLASER-DIRKS

DG-500 ELAN TRAINER

- S/No's.: all

Reason:
Due to a flight accident the Luftfahrt-Bundesamt has well-founded doubts about the airworthiness of the sailplane DG-500 ELAN TRAINER for aerobatic flight with negative g-loads.

Compliance:
Up to the notification of corrective actions, all sailplanes of the a.m. type may be utilized only for restricted aerobatics, i.e. the following figures:

1. loop, 2. turn, 3. spins, 4. lazy eight and 5. chandelle

It is prohibited to fly any aerobatic figures with negative g-loads.

***

To OWNERS:

BRITISH GLIDING ASSOCIATION
KIMBERLEY HOUSE,
VAUGHAN WAY, LEICESTER.
TEL. LEICESTER (0533) 531051

31/11/94.

Glaser-Dirks Flugzeugbau GmbH
Postfach 4120, PLZ D-76626
Tel 07237/89-0 Fax 8922
Im Schollengarten 19-20
D-76646 Bruchsal-Untergrombach
LBA anerkannter Herstellungsbetrieb IB 25
LBA anerkannter Luftfahrttechnischer Betrieb IIA 279

SUBJECT : Airbrakes

EFFECTIVITY : DG-500 ELAN Trainer, all serial no's.

ACCOMPLISHMENT : prior to aerobatics with negative loads, latest at the next annual inspection

REASON : When executing aerobatics with negative loads with the DG-500 ELAN TRAINER, the airbrakes may be sucked out and flutter in the locked position.

INSTRUCTIONS :
1. Aerobatics with negative loads are prohibitted until instructions 2 and 3 have been executed.
2. Inspection of the airbrakes according to instructions for inspection for TN 348/4T
3. Manual changes
   Exchange the following manual pages against the new pages issued Oct. 1994.
   Flight manual
   0.1, 0.3, 4.14
   Maintenance manual
   1, 2, 3, 17
   In addition file the following documents at the end of the maintenance manual:
   Instructions for inspection for TN 348/4T
   Questionnaire and working instructions no. 1 and no. 2 for TN 348/4.

MATERIAL : Manual pages see instruction 3
Instruction for inspection for TN 348/4T
Questionnaire for TN 348/4
Working instructions no. 1 and 2 for TN 348/4T
Special tool 5 V 17
1 threaded rod M10 475 mm (18.7 in.) long
6 nuts M10 DIN 931 or DIN 936
(instead of metric thread M10 parts with 3/8 in. thread may be used).
drawing 5 V 18
8 lock nuts M6 DIN 985 - 8 zn
if necessary two U-brackets 5F 21/3
and 8 poprivets Fero dia. 3 x 6.5 AL Mg5

WEIGHT AND BALANCE : no influence

...2

TNS 11/12/94

Luftfahrt-Bundesamt
-AD-Department-

Airworthiness Directive

In case of any difficulty, reference should be made to the German original issue

Date of issue: 20 October 1994

94-317 Grob

Affected Sailplane:
German Type Certificate No.: 306

GROB

ASTIR CS - Serial Numbers: 1001 to 1536

ASTIR CS 77 - Serial Numbers: 1601 to 1844

ASTIR CS Jeans - Serial Numbers: 2001 to 2248

Subject:
Flight Controls,
Elevator Control,
Elevator Lever Part Number 102-3541 and 102-3542 In The Top Of The Vertical Stabilizer

Reason:
This Airworthiness Directive is promoted by a periodical inspection report of a cracked elevator lever. The cause for the crack was found during a metallographic analysis.

Action:
- Inspection (for P/N 102-3542 only).
- Replacement.

Compliance:
For Sailplanes equipped with elevator lever P/N 102-3542:
- Prior to further flight - Perform a inspection of the affected Part, described in the Grob G 102 Service Bulletin No. 306-33, dated 15 September 1994.
- In case of a positive inspection result - Prior to further flight - Replace the elevator lever with a new one having the P/N 102-3543 in accordance with the Grob G 102 Service Bulletin No. 306-33, dated 15 September 1994, with Installation Instruction No. 306-30/1, dated 11 October 1994.
- In case of a negative inspection result - Not later than 31 December 1994 - Replace the elevator lever with a new one having the P/N 102-3543 in accordance with the Grob G102 Service Bulletin No. 306-33, dated 15 September 1994, with Installation Instruction No. 306-30/1, dated 11 Oktober 1994.

For Sailplanes equipped with elevator lever P/N 102-3541:
- Not later than 31 December 1994 - Replace the elevator lever with a new one having the P/N 102-3543 in accordance with the Grob G 102 Service Bulletin No. 306-33, dated 15 September 1994, with Installation Instruction No. 306-30/1, dated 11 October 1994.

Note: The replacement of the elevator lever is also a part of the LTA-No. 93-041 (3000 flight-hour-inspection). It is able that the actions required by this AD are already been accomplished in accordance with the Installation Instruction No. 306-30/1.

Technical publication of the manufacturer:
Grob G 102 Service Bulletin No. 306-33, dated 15 September 1994, with Installation Instruction No. 306-30/1, dated 11 October 1994 which becomes herewith part of this AD and may be obtained from manufacturer.

Burkhart Grob Luft- und Raumfahrt GmbH&Co.KG
Postfach 12 57
D-87712 Mindelheim

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 by a licensed inspector.

Subject: **Exchange of the elevator lever**

Concerned:

ASTIR CS	S/N 1001 - 1536
ASTIR CS 77	S/N 1601 - 1844
ASTIR CS Jeans	S/N 2001 - 2248

Urgency:

Action 1: Immediately
Action 2: not later than 31.12.1994

Procedure: The exchange of the elevator lever P/N 102-3542, made from aluminum castings (refer to Fig. 1, page 2) or made from aluminum sheet with openings/ lightening holes P/N 102-3541 (refer to Fig. 2, page 2), is already anticipated within the course of extension of the service life before reaching 3000 flight hours (refer to Service Bulletin TM 306-30). Now an inspection and an advanced exchange of the elevator lever by the elevator lever P/N 102-3543, made from aluminum sheet (refer to Fig. 3, page 3), is mandatory as a precautionary measure.

Actions:

1. Inspection of the elevator lever 102-3542

The elevator lever P/N 102-3542 (aluminum castings, Fig. 1) has to be checked for cracks using a proper test procedure (i.e. magnifying glass). If cracks are found, the elevator lever has to be exchanged according to the Installation Instructions No. 306-30/1, before the next flight.

2. Exchange of the elevator lever

If no cracks have been found during the inspection according to Action 1, the castings elevator lever and all other lever models have to be exchanged by the elevator lever P/N 102-3543, made from aluminum sheet (refer to Fig. 3, page 3) according to the Installation Instructions No. 306-30/1 not later than 31.12.1994.

Note: **The exchange of the elevator lever before 31.12.1994 is urgently recommended!**

Material: The material can be ordered from GROB with the attached Purchase Order.

Weight and Balance: Refer to Installation Instructions No. 306-30/1

Remarks:

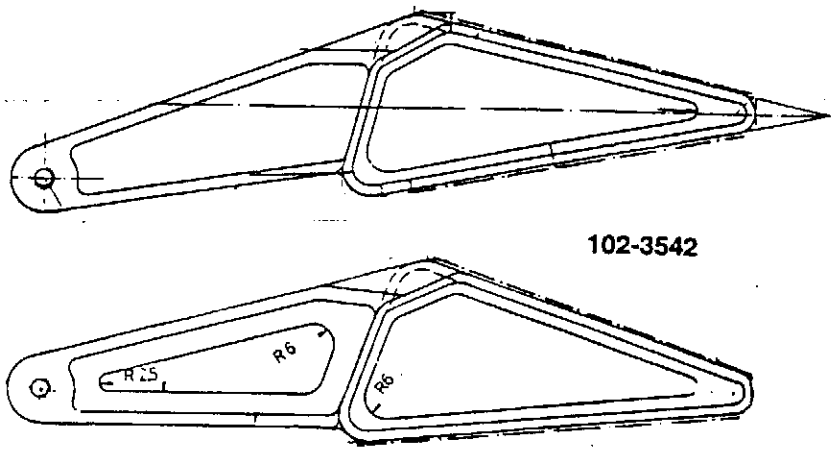
1. The exchange of the elevator lever has to be performed by an authorized aviation work shop and has to be certified in the log book by an authorized inspector.
2. If the 3000 hours inspection has been already performed and/ or the elevator lever has been already exchanged, accomplishment of this Service Bulletin can be certified in the log book with reference to Service Bulletin TM 306-18 or TM 306-30, if the lever P/N 102-3543 (refer to drawing in Fig. 3, page 3) is installed.
3. If you have sold your sailplane in the meantime, wold you kindly pass this information on to the new owner and forward his name and address and aircraft S/N to us.

Mattsies, 15 September 1994

Dipl.-Ing. J. Altmann
(Airworthiness Engineer
Certification Staff)

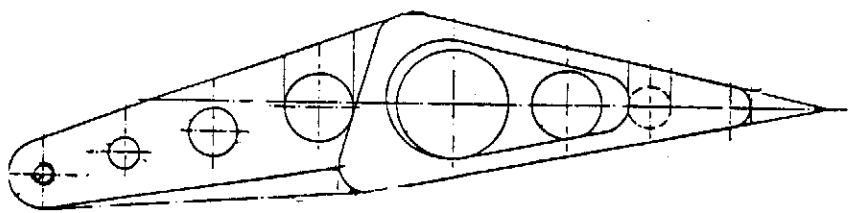
LBA approved:

This Service Bulletin is originally written in German and approved by the German LBA on the 07 October 1994. The translation has been accomplished to the best of our knowledge and judgement. In case of doubt, the German original is authoritative.



102-3542

Abb. 1



102-3541

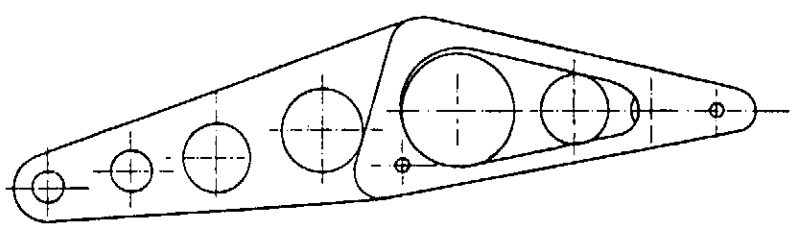


Abb. 2

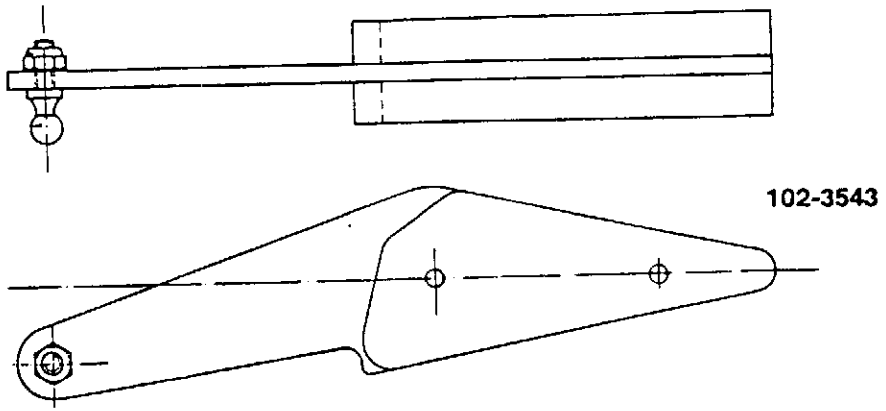
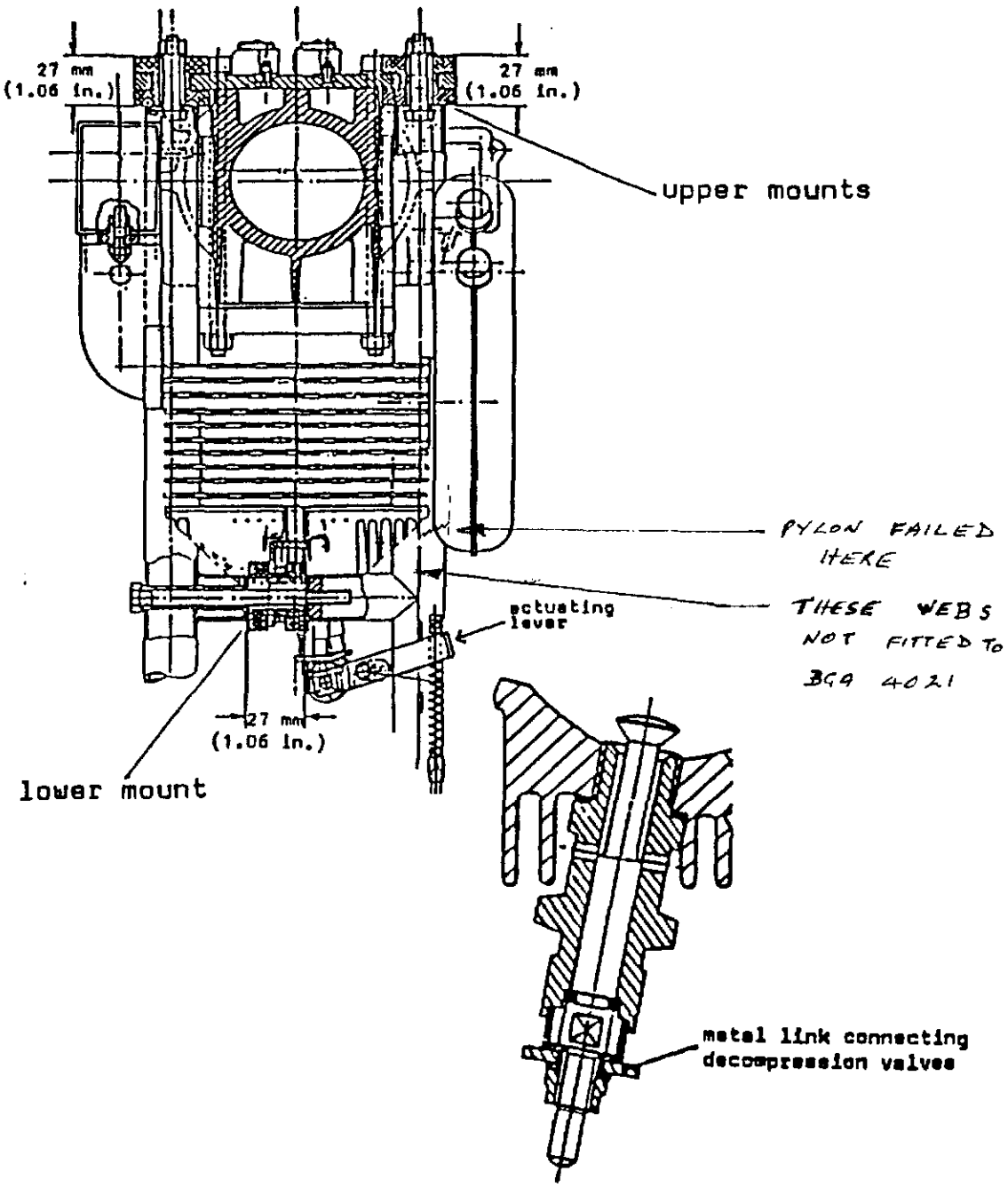


Fig. 3

Reinstalling the power plant (ctd.)

Sketches for power plant removal and reinstallation



CRACKS in DISCUS bT ENGINE FRAME

Grob G 109 TM TNS 12/94

Luftfahrt-Bundesamt
-AD-Department-

Airworthiness Directive

In case of any difficulty, reference should be made to the German original issue

94-262 Grob

Date of issue: September 06, 1994

Affected powered sailplanes:
German Type Certificate No.: 817

GROB
G 109
- S/No's.: 6001 up to 6159

Subject:
Improvement of the flutter behavior of the GROB G 109

Reason:
A tendency to flutter was observed during flight testing at specific excitation frequencies. By installation of a damper in the rudder controls, the flutter behavior can be improved tremendously, so that the flutter tendency no longer exists. In addition the results allow an increase of the maximum permissible rudder mass from actual 4,95 kg (10.89 lbs) to 6,0 kg (13.22 lbs).

Action:
Installation of a rudder damper and a new rudder bell crank lever.
Correction of the Maintenance Manual.

Compliance:
Not later than March 31, 1995.

Technical publication of the manufacturer:
Grob Service Bulletin TM 817-38 dated July 08, 1993 which becomes herewith part of this AD and may be obtained from Messrs.

Burkhart Grob Luft- und Raumfahrt

D-86874 Mattsies
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 by a licensed inspector.

Installation instructions:

CAUTION

Before removing the L'Hotellier quick lock, note the exact length of the control rod.

- remove L'Hotellier quick lock
- install parts in the item sequence 4, 3, 5, 2 onto the free end of the control rod
- item 1 has to be positioned during reinstalling of the L'Hotellier quick lock
- adjust exact length of the control rod and fix with lock nut
- push in bushing (item 4) 2 mm into the securing tube (item 5) and secure it in this position with the spiral pin (item 6) in the drilled hole (2.0 mm dia.). The spiral pin exceeds the bushing for 1 mm to each side.

NOTE

The drilling must be in a vertical plane to the lock plate. The distance of the drilling center to the outer edge of the washer (item 1) is 19 mm. This distance guarantees that the securing tube is secured against turning (a turning of the securing tube would neutralize the automatic securing of the L'Hotellier lock plate).

- to prevent an unintentional moving of the bushing (item 2), it is recommended to fix the bushing using PATTEX or something similar prior to drilling.
- for a correct securing it is sufficient, if the securing tube (item 5) overlaps the lower part of the L'Hotellier lock plate for 3 mm
- if the overlapping is more than 3 mm, the front part of the securing tube can be grind accordingly

NOTE

If necessary, this grinding may be done with the L'Hotellier quick lock screwed far in, because the sliding distance of the securing tube for opening the quick lock is limited by the length of the spring deflection.

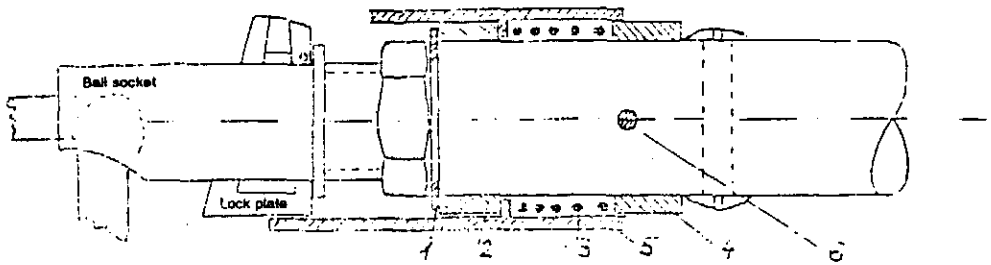
- The visible part of the secured bushing (item 4) has to be painted green. If after connection of the L'Hotellier quick locks the complete "green ring width" of approx. 4 mm is not visible (e.g. only 1 to 2 mm), the securing tube (item 5) does not cover the lower part of the locking plate - therefore the L'Hotellier quick lock is not secured. The reason for this (e.g. failed spiral spring (item 3)) must be rectified prior to the next flight.
- install control rods into sailpane
- check control deflections of ailerons, airbrakes and rudder, if necessary adjust according to Flight and Manual

The translation has been accomplished to the best of our knowledge and judgement. In case of doubt, the German original is authoritative.

GROB
LUFT- UND RAUMFAHRT

Translation of
Installation Instructions for WEDEKIND-Sicherung
(Automatic securing for L'Hotellier quick locks)
Original German Version approved by LBA

Scheme (Scale 2:1):



Description:

The automatic WEDEKIND-SICHERUNG is an alternative to the methods mentioned in the German LTA (AD) 93-001 for securing L'Hotellier quick locks .
The securing tube (item 5) can only be engaged, if the L'Hotellier quick lock is correctly installed. In this condition the securing tube covers the lower part of the lock plate and secures the lock plate against unintentional opening.Thereby the securing tube is fixed in the "secured position" by a pressure spring (spiral spring, item 3) with a spring tension of approx. 1.5 N.
Due to the fact that the securing tube can not cover the lower part of the lock plate, if the connection is incorrect (ball is not completely in the ball socket), the WEDEKIND-SICHERUNG provides also a proper protection against incorrect assembly.

The WEDEKIND-SICHERUNG is suitable to all L'Hotellier sizes. It can be used for horizontal and vertical connections. The optional installation has to be performed according to the relevant airplane manufacturers Service Bulletin and has to be certified in the logbook by an authorized inspector.

Maintenance and Inspection:

The used materials are weather resistant. Corrosion can not occur within normal conditions. Therefore, the WEDEKIND-SICHERUNG is maintenance free. A lubrication with grease and/or oil normally results in a contamination and "glueing" and should be avoided.

During each rigging the function of the fine-steel spring and the sliding fit of the securing tube have to be checked, that an efficient and power-operated oversnapping of the securing tube over the lower part of the cotter occured.

Parts of the WEDEKIND-SICHERUNG		
Item	Name	Material
1	Washer, 20 x 12.5 x 1,0 mm	1.4301
2	Bushing, 20 x 1.8 mm, 6 mm long	PP (Polypropylen)
3	Spiral spring, 19 x 0.8 mm, 20 mm long, tension pressure at 14 mm spring deflection 2.2 N	1.4310
4	Bushing 20 x 1.8 mm, 7 mm long	PP (Polypropylen)
5	Securing tube 23 mm dia., 36 mm long	AlMgSi0.5
6	Spiral pin, DIN 1481, 2 mm dia., 22 mm long	1.4310

Subject: **Securing of L'Hotellier quick release attachments**
A. Installation of WEDEKIND - SICHERUNG
B. Installation of Securing Socket S26

Concerned:

ASTIR CS	S/N 1001 - 1536
ASTIR CS 77	S/N 1601 - 1844
ASTIR CS Jeans	S/N 2001 - 2248
TWIN ASTIR	S/N 3000 - 3291
TWIN ASTIR TRAINER	S/N 3088 - 3291 (with suffix "T")

Urgency: optional (alternative to securings according to German LTA (AD) 93-001)

Procedure: Based on German LTA (AD) 93-001, dated 03.03.1993, a securing for all L'Hotellier quick release attachments, installed in sailplanes and motorgliders, is mandatory and different LBA approved methods are offered. Due to the fact, that the method of securing (safety pin), which was used mainly in the past, may not be suitable to all types of sailplanes or the installation may be complicated, the optional installation of the **WEDEKIND - SICHERUNG** (LBA approved, 18.05.93, refer to appendix) or of the **Securing Socket S26** into the above listed GROB sailplanes is offered.

Actions:

A. WEDEKIND - SICHERUNGEN are suitable to the following control rods:
- aileron connectors
- airbrake connectors
- elevator control rod III

CAUTIONS

1. The installation of the securing, the mainenance and the inspections have to be performed according to WEDEKIND - SICHERUNG (refer to appendix). It is urgently recommended, to check prior to installation, whether the WEDEKIND - SICHERUNG can be installed without any problem (e.g. the L'Hotellier quick release attachment may screwed out so far that the securing socket does not cover the lock plate sufficiently). If any problem arises, the sailplane manufacturer has to be contacted immediately.

2. It is essential, to measure and note the length of the control rods prior to installation of the securing. For removal of the elevator control rod III, it is necessary, to remove the rudder. After installation the control surface deflections have to be checked or adjusted according to the relevant Flight and Maintenance Manual. A functional check of all controls and of the airbrake control system has to be performed.

3. It is very important, that the securing socket covers the lock plate of the L'Hotellier quick release attachment for a minimum of 3 mm.

4. To guarantee a proper function of the WEDEKIND - SICHERUNG, also a correct maintenance of the L'Hotellier quick release attachments is required ("Instructions for the Maintenance L'Hotellier Ball and Swifel Joints", see appendix).

5. The green securing of bushing no. 4, mentioned in "Montagehinweise" is not strongly mandatory.

B. Securing sockets S26 are suitable to the following control rods:

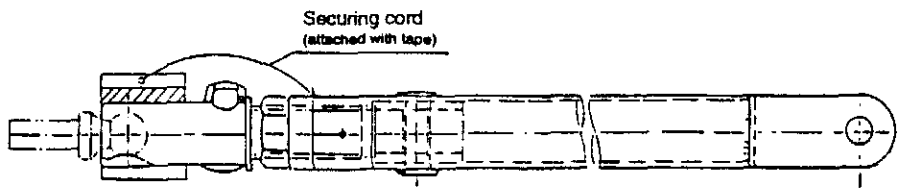
- aileron connectors
- airbrake connectors

NOTE

The securing sockets S26 can only be installed to straight L'Hotellier quick release attachments.

The securing sockets S26 have to be installed as follows:

- the securing sockets can be installed without removal and disassembly of the control rods
- push securing socket onto the quick release attachment and attach it to the rod using a cord
- for installation (or removal) during rigging (or de-rigging) the socket has to be turned as far as the mounting opening of the ball is free
- after installation the socket has to be turned as far as the mounting opening is completely closed
- the **securing sockets S26** have to be checked for a sufficient jam efficiency or have to be exchanged during each annual inspection. Until revision of the relevant Maintenance Manuals, this inspection item has to be included handwritten.



WARNING

Pay attention for the correct locking of the quick release attachment, i.e. the hole in the lock plate must be visible!

Subject: **Inspection of the cylinder head valve seat**

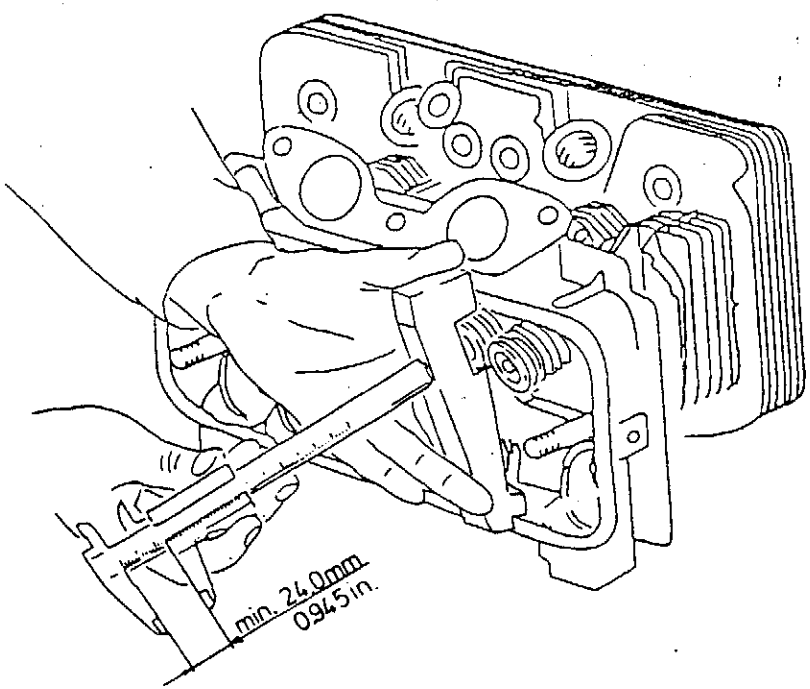
Concerned: Aircraft Engine GROB 2500 E1/D1, all S/N's

Urgency: Every 500 hours during the 500 hours inspection
or at 100 hours (refer to Remark 2.)

Procedure: After 500 to 600 hours operation time, it may occasionally occur, that the valves or the valves seat rings are pounded. To prevent excessive wear or damage, a regular inspection of the cylinder head valve seats is provided as a precautionary measure.

Actions: The inspection of the cylinder head valve seats has to be performed as follows:

1. Remove cylinder head covers form both sides.
2. Measure valve play at all cylinders (nominal value: inlet and outlet valves 0,15 mm - 0,20 mm/ 0.006 - 0.008 in.) and note measured values.
3. Remove L/H and R/H rocker arm assemblies.
4. Position measurement device (P/N G2500-W1-630) above each valve as shown in the sketch below and measure distance to the end of the valve shaft using a depth gauge. This distance must be **minimum 24.0 mm / 0.945 in.** for inlet and outlet valves. If the minimum distance is reached, the affected cylinder heads have to be exchanged immediately.



GROB
LUFT- UND RAUMFAHRT

Service Bulletin
TM 4601-8

Aircraft Engine
GROB 2500

5. Install L/H and R/H rocker arm assemblies.
6. Repeat valve play check at all valves and adjust according to "Operations Manual GROB 2500", if necessary.
7. Install cylinder head covers on both sides. If necessary, install new gaskets for the cylinder head covers.
8. Perform an engine ground run.

Material: - measurement device P/N G2500-W1-630

Weight and Balance: not concerned

Remarks:

1. The inspection can be performed by an authorized aviation workshop and has to certified in the log book by an authorized inspector.
2. If the distance measured in workstep 4. is **less than 24.5 mm / 0.965 in.**, the inspection has to be repeated during every 100 hours inspection.
3. If you have sold your motorglider in the meantime, would you kindly pass this information on to the new owner and forward his name and address and aircraft S/N to us.

Mattsies, 18 July 1994

Dipl.Ing. J. Altmann
(Airworthiness engineer certification staff)

LBA approved:

This Service Bulletin is originally written in German and approved by the German LBA on the 5 September 1994 and is signed by Mr. M. Borsum.
The translation has been accomplished to the best of our knowledge und judgement. In case of doubt, the German original is authoritative.

GROB
LUFT- UND RAUMFAHRT

Service Bulletin
TM 4601-9

Aircraft Engine
GROB 2500

Subject: **Optional installation of spark plugs type CHAMPION REN 30S**

Concerned: Aircraft Engine GROB 2500 E1/D1, all S/N's

Urgency: optional

Procedure: During a comprehensive testing program spark plugs type CHAMPION REN 30S installed in the GROB 2500 aircraft engine have been tested successfully. Therefore the optional installation of the above mentioned spark plugs is offered.

Actions:

1. The spark plugs have to be installed according to the "Operations Manual GROB 2500".
2. The correction of the "Operations Manual GROB 2500" has been included in the new issue of the operations manual (Issue 2, dated July 1994).

Material: —

Weight and Balance: not concerned

Remarks:

1. The installation of the spark plugs can be performed by a competent person.
2. If you have sold your motorglider in the meantime, would you kindly pass this information on to the new owner and forward his name and address and aircraft S/N to us.

Mattsies, 18 July 1994

Dipl.Ing. J. Altmann
(Airworthiness engineer certification staff)

LBA approved:
This Service Bulletin is originally written in German and approved by the German LBA on the 5 September 1994 and is signed by Mr. M. Borsum.
The translation has been accomplished to the best of our knowledge und judgement. In case of doubt, the German original is authoritative.

Datum/ Date	Ersetzt Ausgabe/ Issue Edition	Bearbeitet/ Prepared by	Mustergeprüft/ Approved by	Seite/ Page
18.07.94		R. Vodermeier		

GROB
LUFT- UND RAUMFAHRT

Service Bulletin
TM 4601-1/7

Aircraft Engine
GROB 2500

This Service Bulletin supersedes the Service Bulletin TM 4601-1/6, dated 20.01.88.

Subject: **Service Time between overhauls (TBO)**

Concerned: Aircraft Engine GROB 2500 E1/D1, all S/N's

Urgency: none

Procedure: Based on sufficient experiencies, i.e. engines have accumulated more than 4000 operating hours without substantial break downs, thus the service time between overhauls can be increased up to 1600 operating hours for all related models.

Actions:

1. As of now, the service time between overhauls is increased up to 1600 operating hours.
2. The correction of the "Operations Manual GROB 2500" has been included in the new issue of the operating manual (Issue 2, dated July 1994).

Material: ----

Weight and Balance: not concerned

Remarks:

1. The service time mentioned in this Service Bulletin has to be entered into the log book of the relevant aircraft.
2. The definition of the "Service Time between Overhauls" (TBO) must not be misinterpreted as a period of warranty or guarantee. The service time may be achieved based on correct maintenance (use of original spare parts, maintaining the regular checks and inspections, etc.), proper handling of the engine during operation (use of the recommended fuel and oil grades, etc.) and careful maintenance and preservation during periods of non operation. The checks serve for recognizing wear or troubles prematurely and to start maintenance measures. The relevant informations are given in the operations manual and in the inspection lists.
3. If you have sold your motorglider in the meantime, would you kindly pass this information on to the new owner and forward his name and address and aircraft S/N to us.

Mattsies, 18 July 1994

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BGA Note. CAA AIRWORTHINESS NOTICE No 35 allows "ON Condition" TBO.

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18.07.94		R. Vodermeier		1

ENGINEERING SECTION

See also P/E items in main GASIL

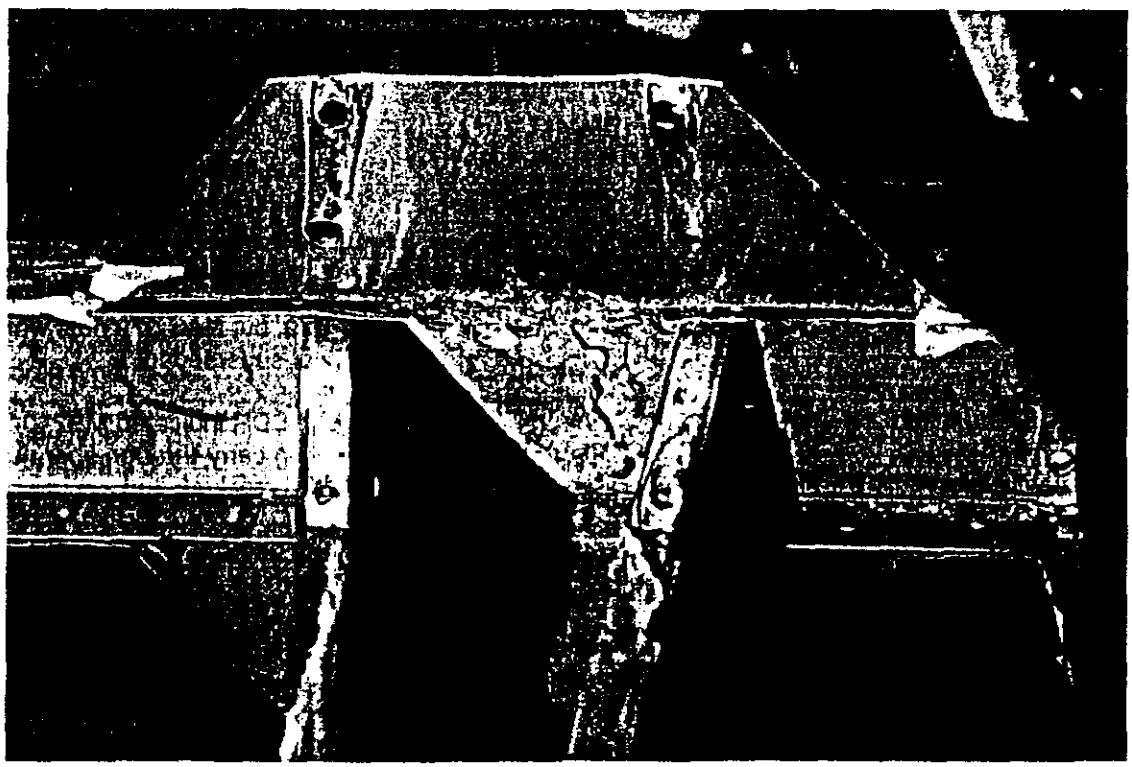
E1. FLAP/AILERON CORROSION

Aircraft type : Piper PA18 Super Cub and PA25 Pawnee (possibly also applicable to all early Piper fabric covered types)

During visual inspection of the fabric covered flap assembly, even though in outwardly good condition, it was decided to remove the fabric to refurbish it fully.

After the fabric was removed, inspection revealed severe corrosion of the flap spar in the vicinity of the hinge attachment. The corrosion was so severe as to seriously weaken the flaps. The construction of the flap consists of a spar channel sandwiched between the hinge fitting on the forward face and the steel doubler on the rear face. The corrosion was between the aluminium spar and the steel hinge fitting.

The engineer reporting the hazard stated that the corrosion could only be detected by an internal inspection of the flap, with either the fabric removed or by making an access hole in the lower fabric covering. The photographs indicate the problem.



REPORTING
(Note: from 16 April 1995 01 in place of 0)

OCCURRENCES
(Form CA 1673, Air Traffic - CA 1261)

Reporters - Anyone.

What - Broadly, anything which hazards or if not corrected would hazard any aircraft, its occupants or any other person.

Mandatory for Public Transport aircraft over 2300 kg, voluntary for all others. Can also be confidential.

NOTE: Procedures for reporting on Form CA 1261 by UK Air Traffic Services Part 1. However, if the report is about a NON-UK incident, CA 1673 should be used.

To Whom - Research & Analysis Dept (formerly SDAU), Civil Aviation Authority, Aviation House, Gatwick Airport, West Sussex, RH6 0YR.

Telephone: (R&AD) 0293 573220 and 1 (normal hours). Out of hours contact local area Airworthiness office or **071 379 7311** which will put you in touch with the CAA emergency telephone list system.

Fax: 0293 573972
Telex: 878753, AFTN: EGGRYAYD

NOTE: Photos or parts are helpful.

References - ANO Article 94, CAP 382 "Occurrence Reporting", AIC 67/1991 (Pink 23) "Occurrence Reporting", AIC 68/1991 (Pink 24) "Occurrence Reporting by Air Traffic Controllers".

REPORTABLE ACCIDENTS

Reporters - The commander of the aircraft, or if he is killed or incapacitated, the operator. If the accident is on or near an aerodrome, then the aerodrome authority.

What - Where anyone associated with the aircraft, or a third party, is killed or injured. Also if the aircraft sustains damage or structural failure which requires major repair or replacement of the affected component.

To Whom - Immediately notify Chief Inspector, Air Accidents Investigation Branch, Department of Transport.

Telephone: 071-276 6000 (24 hour).

Also notify local police authority.
NOTE: Reporters will be advised how administration will be progressed by the Air Accident Investigation Branch, DRA Farnborough, Hants, GU14 6TD.

Telephone: 0252 510300 (normal hours)
Fax: 0252 540535
Telex: 858119, AFTN: EGGCYLYX

References - CAP 393, Air Navigation Order and Regulations Section 8 - "Investigation of Accidents", AIC 125/1992 (Pink 62) "Duty to Report Aircraft Accidents".

BIRDSTRIKES
(Yellow Form CA 1282)

Reporters - Anyone.

What - All Bird strikes, and carcasses found on aerodromes which appear to have been struck by aircraft. May be used in place of CA 1673 if the damage to the aircraft is such that it is an Occurrence Report. Photographs of damage are helpful. Bird remains - see below.

To Whom - CAA Research & Analysis Dept, address and phone etc, as for Occurrence Reporting.

If you are not sure of the species, send bird remains (even feathers) to Birdstrike Avoidance Team, Central Science Laboratory, Tangley Place, Worplesdon, Guildford, Surrey, GU3 3LQ.

Telephone: 0483 232581 (normal hours).
Fax: 0483 234675

References: AIC 20/1993 (Pink 75) "Bird Strikes on Aircraft - Reporting". Safety Sense Leaflet No. 10A "Bird Avoidance".

AIRMISSES
(Form CA 1094)

Reporters - Pilots involved.

What - Whenever a pilot considers his aircraft may have been endangered during flight by the proximity of another aircraft to the extent that a risk of collision existed.

To Whom - Immediate radio report to the ATS Unit with which the pilot is in communication, prefixing the message **"AIRMISS"** or if this is not possible immediately after landing in the UK by telephone or other means to any UK ATS Unit but preferably to an ATCC. In UK airspace it is highly desirable, in addition, to report the airmiss direct to West Drayton - **Freephone (including from mobile phones) 0800 515544 or by fax 0500 300120** so that radar tracing action can be implemented. Speed is essential.

Confirm in writing:-
- In UK airspace using Airmiss Report Form CA1094 within 7 days to Joint Airmiss Section, Hillingdon House, Uxbridge, Middlesex, UB10 0RU.

Telephone: 0895 276121 or 276122 (normal hours).
Fax: 0895 276124
Telex: 934725, AFTN: EGGFYTYA

- if outside UK airspace report should be sent to appropriate foreign authority with copy to CAA Safety Data & Analysis Unit. Use either State's form, approved Company Form or CA 1094.

References - UK Air Pilot Section RAC3-1-25 Section 12, 139/1993 (Pink 89) "Airmiss Reporting - UK and Foreign Airspace".

WAKE TURBULENCE
(Form CA 1695)

Reporters - Pilots and Air Traffic Controllers.

What - Reports of incidents occurring behind any class of aircraft and during any phase of flight e.g. en route, climb, descent, as well as the approach and take-off phases.

To Whom - Wake Vortex Incidents, Room BG17 (Scientific Group), Air Traffic Control Evaluation Unit, National Air Traffic Services, Bournemouth International Airport, Christchurch, Dorset, BH23 6DF.

Telephone: 0202 472398 (normal hours)
Fax: 0202 472236

NOTE: If loss of control was significant, use CA1673 - Occurrence Report form.

References - AIC 178/1993 (Pink 95) and Safety Sense Leaflet No 15, "Wake Turbulence"

CONFIDENTIAL HUMAN FACTORS INCIDENTS (CHIRP)

Reporters - Any ATPL, CPL & Licensed Air Traffic Controller.

What - Any event where confidentiality is essential e.g. human factors, own errors. (Maintenance of confidentiality may limit investigation).

To Whom - Forms available from Confidential Reports, Freepost, CHS DRA, Farnborough, Hants, GU14 6BR

Telephone: 0252 394375 (24 hour).
Fax: 0252 376507

References: AIC 141/1992 (Pink 70) "CHIRP Programme"

Further copies of forms may be obtained from: CAA Printing & Publication Services, 37 Gratton Road, Cheltenham, Glos, GL50 2BN.
Telephone: 0242 235151
Fax: 0242 584139

CAA SAFETY PROMOTION
October 1994

YOUR REPORT COULD PREVENT SOMEONE ELSE'S ACCIDENT