BRITISH GLIDING ASSOCIATION

BGA TECHNICAL COMMITTEE

TECHNICAL NEWSHEET TNS 7/8/94

PART 1 Airworthiness "AGGRO". Please refer to the BGA 1994 Red Pages.

1.1. Puchacz Speed Brake paddle attachments to operating spigots. Badly worn and circlips missing. Reported by John Smith R.N.A.S. Culdrose.

1.2. LS & LS4 Bonding Of Forward Elevator Mounting bracket in fuselage. LBA AD 93-155 is repeated herewith.

1.3. KA13 Aileron Attachment Spar Detached for approximately 18". Thought to be gale damage due to unlocked controls. (York Gliding Centre).

1.4. KA8 Rudder Pedals - Pipe Clips broken and pedal assemblies loose. Repeat of TNS 1/2/81 and 5/6/84! (Peter Philpot - Bowland Forest Gliding Club).

1.5. Bocian 1D Rear Canopy Departed The Glider - (Neither Damaged) during aerobatics. Locking pin strengthened. (Borders Gliding Club).

1.6. KA8 Control Horn Detached - photo from Newark & Notts G.C. herewith. Possibly due to water ingress and/or overload?

1.7. PHOEBUS - Elevator Not Connected. Violent impact with the ground. Front fuselage destroyed. Spinal injuries!

WHY NOT DO A POSITIVE CONTROL CHECK before each flight after assembly? (Reported by Kent Gliding Club).

1.8. Safety Device for L'Hotellier Ball and Swivel Connectors.

The WEDEKIND - SICHERUNG safety device is LBA approved. Details herewith. Applicable NIMBUS 2, CIRRUS, JANUS, VENTUS, DISCUS (A).

1.9. JANTAR (Series) Puchacz & Junior - Control Rod End Swages Splitting. GFA (Australia) AD431 herewith, tells the story!

1.10. Teledyne/Bendix Magnetos (SLMG's & TUGS).
FAA A/D 94-01-3 herewith draws attention to Magneto Coil failures, which may ruin your day particularly on a single ignition engine! Compliance is Mandatory in UK.

PART 2 GENERAL MATTERS

2.1. CAA Light Aircraft Maintenance Schedules (LAMS Blue Book) applicable S.L.M.G's and Tugs. All registered owners should have received April 1994 (corrected) amendment 3 to CAP 411. If not, apply to CAA Aircraft Maintenance Approvals, 0293 567171 quoting your aircraft registration.

2.2. BGA Glider C.of.A. Renewals. In the case of a recent fatality, the C.of.A. was found to be out of date, because the owner had failed to mail the Inspector's renewal submission to the BGA office for re-validation. This is not only contrary to BGA Regulation 3.2, but may also invalidate the owners insurance cover?

2.3. S.L.M.G. & Tug C.of.A. Renewals. It is poor management to allow the C.of.A. to expire, when renewals can be submitted 56 days before expiry. By so doing, you only loose the aircraft for as long as it takes to complete the inspection and the work (if any) and not for the additional time necessary to process the renewal (several weeks!).

One S.L.M.G. operated for several months with an expired C.of.A., because no one person was in charge of it!

2.4. Safety of Winching Equipment. Whether or not the Health & Safety Legislation applies, we all have a Common Law Duty of Care, which we must exercise if we are "Managing" equipment on behalf of our members, or casual by-standers.

A recent incident involving a cable retrieve winch has drawn attention to this aspect of gliding operations.

HOW CARE CONSCIOUS IS YOUR CLUB

2.5. SPARK PLUGS - Malfunctions on AVGAS. There is accumulating evidence that Spark Plug failure by the accumulation of lead deposits on electrodes, will cause pre-ignition, on some aeroplane types. Evidence of a brown stain on the ceramic sleeve of central electrodes, and of lead clinker or beads of lead deposits elsewhere, should be removed TOTALLY. There is evidence that, in some applications plugs may need cleaning more frequently than at 50 hour intervals. Disintegration of the ceramic sleeve on the centre electrode has been illustrated in the G.A.S.I.L.. A significant loss of power will result from pre-ignition!

Dick Stratton
Chief Technical Officer

BW 94-04

TELEDYNE CONTINENTAL
AIRWORTHINESS DIRECTIVE
APPLIANCE
SMALL AIRCRAFT & ROTORCRAFT

94-01-03 Teledyne Continental Motors: Amendment 39-8785. Docket 93-ANE-44. Supersedes AD 73-07-04, Amendment 39-1731 (Bendix AD).

Applicability: Teledyne Continental Motors (TCM) (formerly Bendix) S-20, S-200, and S-600 series magnetos with red or black Bendix (not TCM) data plates having serial numbers without any letter prefix, or serial numbers lower than A16058 having the letter "A" prefix; S-20, S-200, S-600, and S-1200 series magnetos with blue Bendix (not TCM) data plates having serial number 901001 and lower; and S-1200 series magnetos with red Bendix (not TCM) data plates having serial numbers without any letter prefix, or serial numbers lower than A132844 having the letter "A" prefix. These magnetos are installed on but not limited to reciprocating engine powered aircraft manufactured by Beech, Cessna, Maule, Mooney, and Piper.

Compliance: Required as indicated, unless accomplished previously.

To prevent magneto failure and subsequent engine failure, accomplish the following:

(a) For TCM (formerly Bendix) S-20, S-200, and S-600 series magnetos, replace Bendix ignition coils and rotating magnets identified in the Detailed Instructions of TCM Service Bulletin (SB) No. 637, dated December 1992, with appropriate serviceable ignition coils and rotating magnets at the next 100 hour inspection, the next annual inspection, the next progressive inspection, or the next 100 hours time in service (TIS) after the effective date of this AD, whichever occurs first.

(b) For TCM (formerly Bendix) S-1200 series magnetos, replace Bendix ignition coils identified in the Detailed Instructions of TCM SB No. 637, dated December 1992, with appropriate serviceable ignition coils at the next 100 hour inspection, the next annual inspection, the next progressive inspection, or the next 100 hours TIS after the effective date of this AD, whichever occurs first.

NOTE: The rotating magnets on the S-1200 series magnetos already incorporate the improved TCM design.

(c) After compliance with paragraphs (a) or (b) of this AD, as applicable, and prior to further flight, mark the magneto in accordance with the Identification Instructions of TCM SB No. 637, dated December 1992.

(d) An alternative method of compliance or adjustment of the compliance time that provides an acceptable level of safety may be used if approved by the Manager, Atlanta Aircraft Certification Office. The request should be forwarded through an appropriate FAA Principal Maintenance Inspector, who may add comments and then send it to the Manager, Atlanta Aircraft Certification Office.

NOTE: Information concerning the existence of approved alternative methods of compliance with this airworthiness directive, if any, may be obtained from the Atlanta Aircraft Certification Office.

(e) Special flight permits may be issued in accordance with FAR 21.197 and 21.199 to operate the aircraft to a location where the requirements of this AD can be accomplished.

(f) The replacement shall be done in accordance with the following service bulletin:

Document No.	Pages	Revision	Date
TCM SB No. 637	1-2	Original	December 1992

Total pages: 2.

ROLLADEN-SCHNEIDER Flugzeugbau GmbH LBA-Nr. EB - 4	Technical Bulletin No. 3043 / 4035	LS3-a LS3-17 LS4, -a	Page 1/1 Edition July 93

BGA TN3 9/10/93. To owners 10/8/93

SUBJECT : Bonding of forward elevator mounting bracket in fuselage

EFFECTIVITY : Sailplane model LS3, versions LS3-a and LS3-17
sailplane model LS4, versions LS4 and LS4-a

ACCOMPLISHMENT : immediately

REASON : In one case the forward elevator mounting bracket on the vertical tail fin became loose.

MATERIAL and INSTRUCTIONS : Check the forward elevator mounting bracket for the following:
Fixture of the bracket by applying a torque 15 Nm (max. 6 kg (13 lbs) at lever arm 0.25 m (10 in)) at the bracket housing, without applying load to the bonded-in ball. Cracks in paint around bracket may indicate a loose mounting.

If the bracket is loose, repair with a new bracket 4R4-7c according to Instruction BA-4. When the bonding of the ball is loose, re-bond with elevator fitted.

WEIGHT AND BALANCE : Not affected

REMARKS : Inspection by operator, repair by national authority approved repair station.
Accomplishment must be checked by inspector at next annual inspection and signed in logbook, for LS4 models also in Maintenance Manual page 14-2 (for USA: Instructions for Continued Airworthiness page 6-2), TB-AD-Accomplishment Checklist.

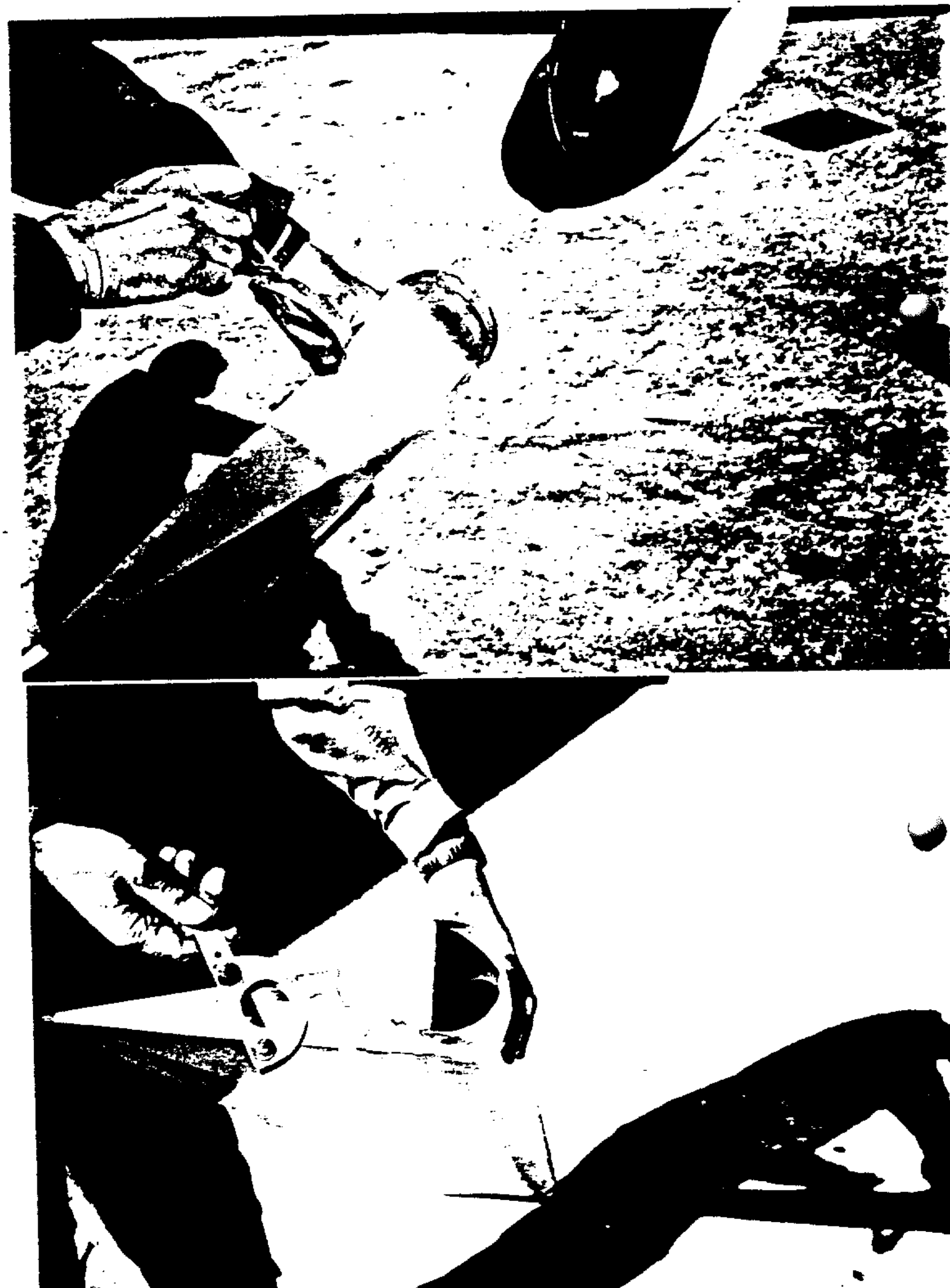
LBA-approved :

20. Juli 1993

Erstellt: 14.Jul.93	Geprüft: 14. JULI 1993

LBA-AD 93-155

KA8. Control Horn Detached.



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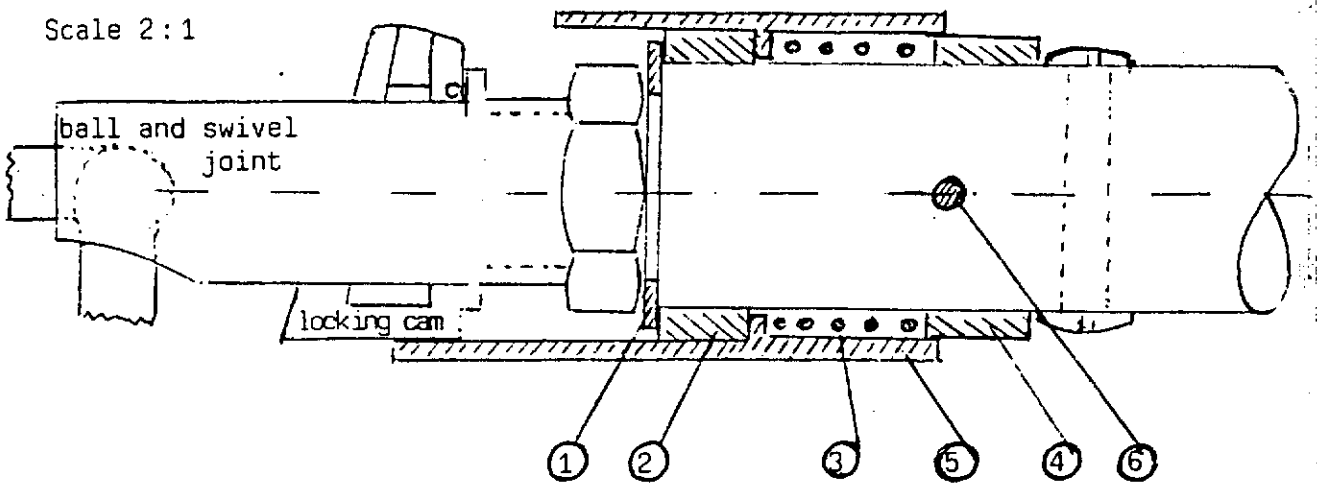
WEDEKIND - SICHERUNG

Safety device for
L'HOTELLIER ball and
swivel connectors

LBA signed:
10. Juni 1994

Scale 2 : 1



Description

The automatic WEDEKIND safety sleeve is an alternative to the other safety devices for "L'Hotellier" ball and swivel joint connectors listed in the LBA Airworthiness Directive No. 93-001 L'HOTELLIER.

Only the coupling ball fully home in the swivel joint, the WEDEKIND safety sleeve (5) will slide over the lower end by the wedge-shaped locking cam and secures the latter from being released unintentionally. The safety sleeve is held in the "secured" position by a compression spring (3) with a force of 1,5 N.

The WEDEKIND safety sleeve is also a protection against improper control connections as it will not slide over the lower end of the wedge-shaped locking cam if the coupling ball is not fully home in the swivel joint.

The WEDEKIND safety sleeve may be used for all sizes of "L'Hotellier" couplings, whether straight or vertical control rod connections are concerned.

Retro-fitting of the safety sleeve must comply with the relevant Technical Note issued by the aircraft manufacturer - its proper accomplishment is to be entered in the log book by a licensed inspector.

Maintenance and inspection

The materials used for the fabrication of the WEDEKIND safety sleeve are weather resistent. Under normal operating conditions corrosion will not occur. The safety sleeve therefore is maintenance-free. Lubrication with grease or oil will normally lead to fouling and gumming - so this should better be avoided. With the control rods connected, the safety sleeve is to be checked for correct function by verifying that it has slid properly and automatically over the end of the wedge-shaped locking cam.

The WEDEKIND safety sleeve consists of the following parts (shown cross-hatched in the above sketch):

1 off washer, ø 20 x ø 12,5 x 1,0 mm	Part 1
1 off bushing, ø 20 x 1,8 mm, lenght 6 mm	Part 2
1 off compression spring, ø 19 x 0,8 mm, lenght 20 mm	Part 3
1 off bushing, ø 20 x 1,8 mm, lenght 7 mm	Part 4
1 off safety sleeve, ø 23 mm, lenght 36 mm	Part 5
1 off roll pin, DIN 1481, ø 2 x 22 mm	Part 6

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WEDEKIND - SICHERUNG

Safety device for
L´HOTELLIER ball and
swivel connectors

LBA signed:
10. Juni 1994

Hints for retro-fitting

With the "L´Hotellier" swivel joint unscrewed from the control rod (be sure to measure the length of engagement reach of its threaded shaft in the rod as otherwise a re-adjustment of the control surface is required), slide the components of the safety sleeve on the free end of the rod in the following order: (4), (3), (5) and (2) . Re-install the swivel joint - with lock washer No. (1) fitted to the threaded portion of the shaft - and screw it into the control rod until the correct length of engagement is obtained, then tighten lock nut.

Slide bushing No. (2) 2 mm into the safety sleeve No. (5). Hold the bushing No. (4) in the position by fixing with an adhesive compound, e.g. Cyanoacrylate. Drill a 2 mm hole through the bushing and body of the "L´Hotellier" connector, at 90 deg. relative to the wedge-shaped locking cam and 19 mm from hole center to outer face of washer No. (1), as shown in the drawing. Drive the roll pin No. (6) into the hole to secure bushing No. (4) in position, leaving 1 mm protruding on either side . This 19 mm distance ensures that projecting ends of the roll pin are situated between the cut-outs of the safety sleeve with the latter in "locked" position - thus preventing the sleeve from rotating and becoming dislocated.
In case of a rotating movement of sleeve, even though it is pushed forward by the spring No. (3), the wedge-shaped locking cam of the "L´Hotellier" coupling will not be secured.

To secure the wedge-shaped locking cam properly, an overlap of the safety sleeve of 3 mm relative to the lower end of the slide is sufficient.

Should the travel of the safety sleeve be more, its front end can be shortened (by filing). This might be required in the case of swivel joints being screwed deeply into a control rod, allowing the sleeve - the travel of which is only limited by the length of the channel for the compression spring - to move too far forward.

The protruding portion of bushing No. (4) - visible when sleeve No. (5) is in the "locked" position - must be marked GREEN (width approx. 4 mm).

If, after having connected the "L´Hotellier" coupling, the full width of this green ring is not visible, but only 1 or 2 mm, the safety sleeve No. (5) has not fully moved over the lower end of the locking cam, so the "L Hotellier" coupling is not secured. The cause (a broken compression spring, for instance) must be resolved before the next flight.

Hints concerning non-adjustable "L´Hotellier" control rod coupling No. RZ 9.41

For retro-fitting the WEDEKIND safety sleeve, the "L´Hotellier" swivel joint must be drilled out from the control rod and re-riveted as per the aircraft manufacturer´s relevant Technical Note.

Lock washer No. (1) is omitted.

THE GLIDING FEDERATION OF AUSTRALIA

GFA AD 431
(ISSUE 1)

GFA AIRWORTHINESS DIRECTIVE

TYPE AFFECTED:

SZD-38A JANTAR 1
SZD-41A JANTAR STANDARD
SZD-42
SZD-42-1 JANTAR 2
SZD-42-2 JANTAR 2B
SZD-48 JANTAR STANDARD 2
SZD-48-1 JANTAR STANDARD 2
SZD-48-3 JANTAR STANDARD 3
SZD-50-3 PUCHACZ
SZD-51-1 JUNIOR
SZD-55-1

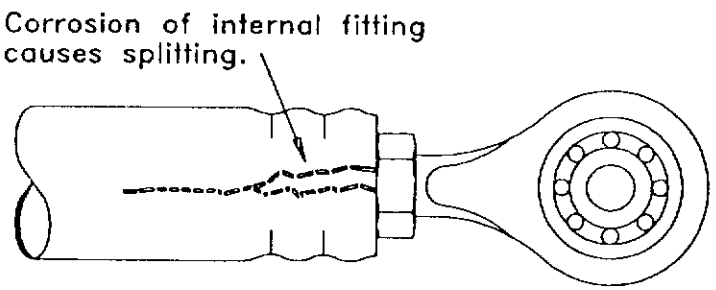
SUBJECT: Corrosion and cracking of the swaged pushrod ends.

BACKGROUND: On a SZD-48-1 Jantar Standard 2 the swaged pushrod end split open under the pressure caused by exfoliation corrosion.

These gliders have proven to be vulnerable to corrosion whenever they have been allowed to get wet and so special precautions need to be taken to dry the glider should it get wet. Special care should also be taken to ensure that the glider trailer is water tight.

ACTION REQUIRED: 1. Before next flight examine all swaged pushrod ends for signs of corrosion and splitting. (see figure 1 for details.) Note: some of these swages are difficult to access and special care must be taken to ensure that all fittings are inspected. The use of a mirror is highly recommended.

FIGURE 1



Note that the self aligning rod end shown is not the only type of fitting swaged into pushrods. Other types include the control quick connectors and the clevis fork.

SIGNED:	For and on behalf of:
CHIEF TECHNICAL OFFICER AIRWORTHINESS	THE GLIDING FEDERATION OF AUSTRALIA