**BRITISH GLIDING ASSOCIATION**

**BGA TECHNICAL COMMITTEE**

**TECHNICAL NEWSHEET TNS 5/6/93**

**PART 1** Airworthiness "AGGRO". Please add to the 1993 Blue Pages.

1.1. "BGA Accidents to Gliders 1992". The only "Technical" causes of accidents/incidents listed were:

a) unconnected ailerons (Skylark)
b) insecure canopy locking devices
c) Two hook failure to release (on two separate occasions (KA7).

Please action these "technical" deficiencies and eliminate them in 1993!

1.2. "Junior" Canopy Jettison pin migrates - secured with soft copper wire.

1.3. Skylark 4 - Ailerons Disconnected. Pip-pin found to have disintegrated - Reported by York Gliding Centre.

1.4. Kestrel 20. Rudder drive actuator cracked at the weld, after one year in service - Repeat inspection annually. (Peter Poole - Surrey Hills G.C.).

1.5. Kestrel 19 - Tailplane Locking Bolt found unsecured.

1.6. KA13. (61,100 launches) - Some evidence of glued joints fractured around air brake boxes. (Derek Phillips - Stratford on Avon G.C.).

1.7. Bocian - Inboard Centre Aileron. Operating horns found detached from aileron spar. Glider flown in this condition for some time!

Inspect all Bocians as soon as possible and specifically include in Daily Inspections. (David Wilson).

1.8. Pirat. Aileron operating horns found loose. "D" box opened up. Mounting blocks found to be detached. Grease penetration a possible cause. (Pat Rowell - Clevelands G.C.).

1.9. BIJAVE CANOPY CATCH - Product Improvement. Sketch herewith by Tony Moss - Borders G.C. is self explanatory.

1.10. SLINGSBY T21B (Sedburgh). Cracks found in the wing root welded brackets (3 off). Repair as required (M.E. DeToore - Dukeries G.C.).

1.11. SHK Rudder Cables badly worn at the attachment to the Rudder Vator Mixer. Inspect as soon as possible adjacent to the split-pin hole in the end fitting (Derek Taylor - North Yorkshire Sailplanes).

1.12. LS3/LS4 Series Sailplanes. Trim Weight Adder Bracket Cracked or Disintegrated. LBA A/D 93-083 herewith, explains the problem, (Ref TNS 3/4/93 item 1.15).

1.13. NIMBUS (Series) D'Hotelier Ball & Swivel Joint (herewith) refers to LBA A/D 93-001 and requires action as indicated therein.

1.14. Puchacz. Failed Rudder Cable turnbuckle at Rudder pedal attachment. Tech Note sent to all owners/operators 6/5/93. Suggested modification is to insert a length of cable between turnbuckle and the pedal - use correctly matched and swaged cables. Reported to the Manufacturer.

1.15. Puchacz - Wheel Bearing Failures. A Tost wheel assembly has been fitted by Coventry G.C.

1.16. Puchacz - Rear Control Gaiter becomes "Strangled" when seat is fully forward, restricting UP elevator. (Alan Garside - Kent G.C.).

1.17. IS 28 M2A Undercarriage Support Structure Damaged (repeatedly) due to heavier than acceptable landings. Possible cause identified as low approach speed with both flaps and air brakes deployed.

1.18. M.T. Propellers (Electric). LBA A/D 93-088 (herewith) requires REPLACEMENT of the motor.

1.19. ASW 20 FL Gliders with Winglets - Wing Root Structure requires remanufacturer - Preliminary FAX herewith precedes a new SERVICE BULLETIN.

1.20. Access to Essential Controls PIK 20D. Tow Release Control has been relocated at the bottom of the Instrument Panel for better access by shorter pilots. (Sandy Torrance - Cambridge G.C.).

1.21. SLICK MAGNETOS - 500 Hr Inspections. Extract from GASIL explains the need!

1.22. S.L.M.G. Fuel Tanks, particularly T61(F)'s which have been in storage. The fuel tank and the entire fuel system should be drained and flushed out.

The sump drains should be functioned daily. (Shenington Soaring Centre).

1.23. Propeller Performance & Vibration. Cleaning and polishing both faces of the propeller is recommended. Photo's herewith illustrate the problem!

**PART 2** **GENERAL MATTERS**

2.1. Oil Temperature Gauge Replacements (T61/T61(F). For those of you who have successfully wrecked your capillary temperature gauges, the following solutions could apply.

a) Obtain a replacement from automotive/industrial sources.
b) Fit WESTACE 2 A9-2 (12 volt electrical)
c) Fit LUCAS KIT SIB 421 (12 volt). Sender unit has to be adapted to the sump plug. (12 volt supplies must be fused at 2 AMPS).

Information supplied by Ian Hammond - Portsmouth RNGC, and Mike Gagg - Wrekin G.C.

2.2. SPURIOUS VHF Transmissions from HAND - HELD Operators. GASIL Extract demonstrates the problem.

2.3. STARTER MOTOR BREAK-UPS - TUGS

GASIL item herewith, illustrates the problem, which can be resolved by fitting a Bendix key combined IGNITION/STARTER Switch, which isolates the non-impulse Magneto during starting.

2.4. CAA Charges. (Ref Airworthiness Notice No. 25 at Issue 19, March 1993) have increased from £46 to £48 per 500kgs (or part thereof) per year of C.of.A. validation. Typically S.L.M.G.'s above 500kgs are now £288 for a 3 year C.of.A.

2.5. TUGS/S.L.M.G.'s - Testing For Compressions by hand turning the engine. To avoid accidents or injury, make sure the IGNITION IS OFF and rotate the engine backwards. Magnetos are most unlikely to "fire" in reverse. Never start an engine without taking standard precautions - wheels chocked, competent operator in the cockpit etc!

Dick Stratton
Chief Technical Officer

De/From

| | | |
|---|---|---|
| Date : 06/04/1993<br>Heure : | Nom :<br>Marie-Cécile LE GARREC | Service : |
| Copie(s) interne(s) | | Visa responsable : |

A/To

| | |
|---|---|
| Société BRITISH GLIDING ASSOCIATION<br>Numéro fax : 19.44.533.515939 | Adresse : |
| Mr/Mme : R.B. STRATTON | Service : |

OBJET : **ASW20FL GLIDERS** with WINGLETS!!

TEXTE :

Following our Service Bulletin N° 20-16 relative to the wing extensions of the ASW20FL, we can inform you as following :

We have found a solution in order to recover the use of the wing tips and we have now the approval of our official authorities. The job to do on the glider is quite important because it means the remanufacturing of the structure of the root of the wing. The cost of this modification is F.Fr. 21 000. If customers want to have it done, they can contact us for further details.

A new Service Bulletin explaining this, is about to be approved by our Authorities and will be sent to you as soon as possible.

We remain at your disposal for any further information.

With our best regards,

**SNCA (CONSTRUCTIONS AERONAUTIQUES)**

**Z.I. de l'Aérodrome B.P. 44 36300 LE BLANC FRANCE**
**Tél. 54.37.07.96 - 54.37.06.91 fax N° 54.37.48.64**

Registered Office as address

Administrator and Secretary: Barry Rolfe

Kimberley House, Vaughan Way,
Leicester LE1 4SE
Telephone 0533 531051
Facsimile 0533 515939

# British Gliding Association

6th May 1993

**BGA TECH/NOTE** **Ref TNS 5/6/93**

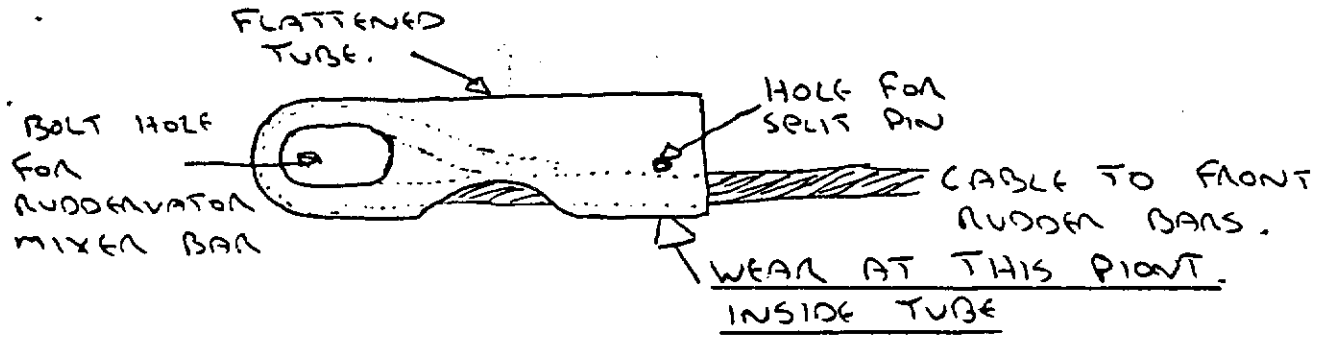
**TO: ALL** **PUCHACZ OPERATORS**

Failure of Rudder Cable turn-buckle at the Rudder pedal attachment occurred in spin recovery action at Deeside Gliding Club. Glider recovered safely.

Failure occurred between eye-end and the thread, but not at the termination of the thread.

CORROSION and failure to swivel are probable causes of this failure. INSPECT all Puchacz, and rectify as required; a.s.a.p.

Dick Stratton
Chief Technical Officer



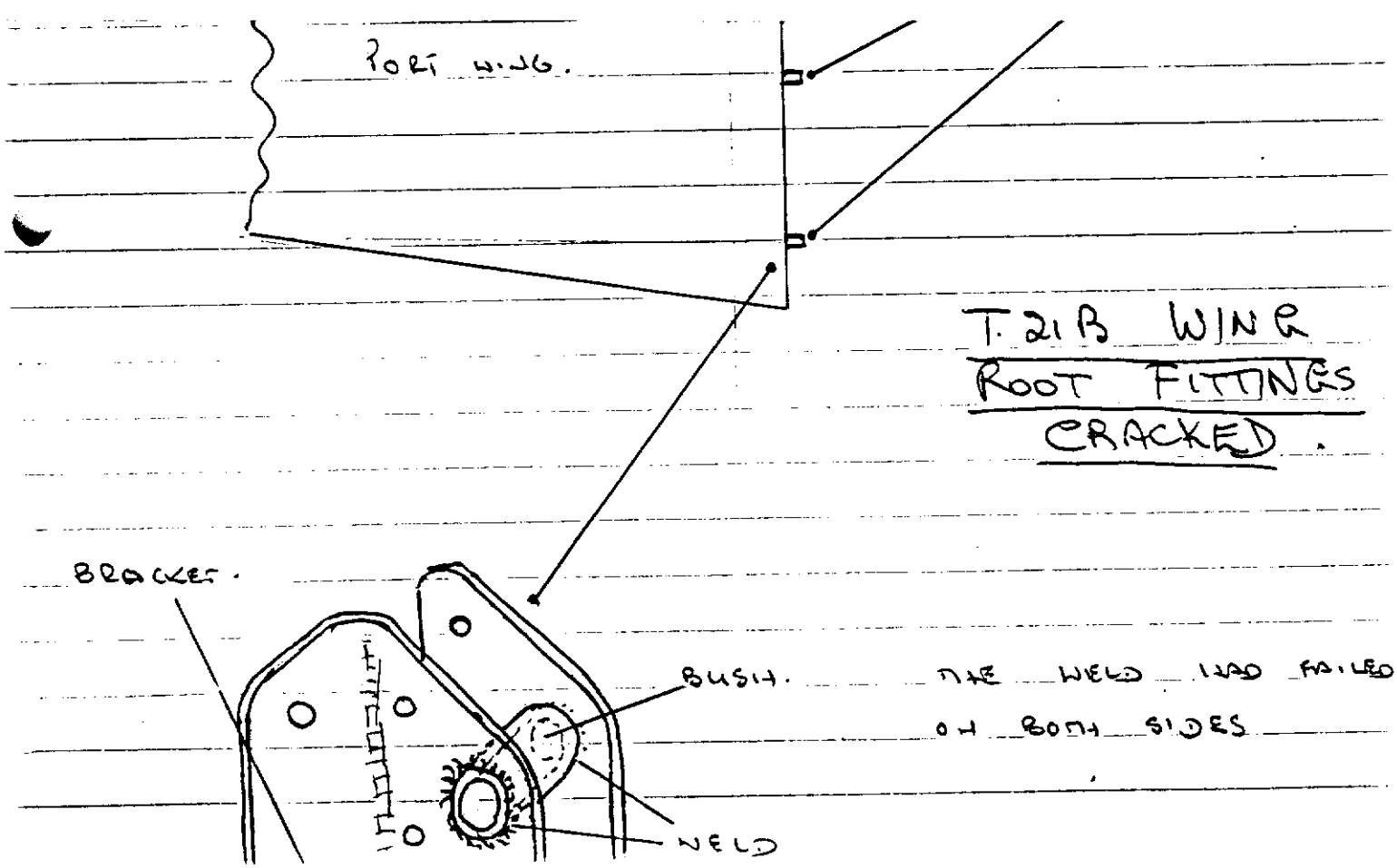

Seeing the initial stages of wear is not that visible and i feel all SHK's should be looked at as soon as possible and a TNS should be included in the next TECNICAL NEWSSHEET.

Yours sincerly

SHK Rudder Cables.

DEREK TAYLOR.

## T.21 ROOT END FITTINGS.



JWS 5/6/93

Luftfahrt-Bundesamt
D-3300 Braunschweig

**Airworthiness Directive**

*Translation of the "Lufttüchtigkeitsanweisung" (LTA). In case of any difficulty, reference should be made to the German original issue.*

# 93-083 Rolladen-Schneider

Date of issue: 15. März 1993

Affected gliders:

German Type Certificate No. 317

ROLLADEN-SCHNEIDER
LS 3, LS 3-a and LS 3-17
- all S/No's.

German Type Certificate No. 345

ROLLADEN-SCHNEIDER
LS 4 and LS 4-a
- all S/No's.

Subjekt:
Inspection and replacement of trim weight holder

Reason:
In several cases the trim weight holder (according to drawing 4R8-19a) cracked or disintegrated in the welding region between base plate and fixture bracket.

Actions and Compliance:
1. Before next flight: Visual inspection of trim weight holder for cracks.
2. If no cracks were found: see part 4.
3. If cracks were found, actions of part 4. must be performed immediately
4. Exchange trim weight holder against the modified version P/N 4R8-19c not later than December 31, 1993.

Technical publication of the manufacturer:
Rolladen-Schneider Service Bulletin TM No. 3040 / 4033 dated January 06, 1993 which becomes herewith part of this AD and may be obtained from Messrs.

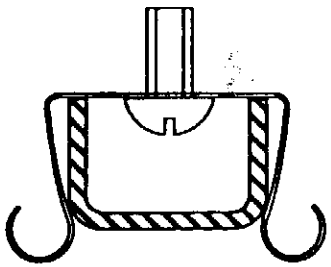
Rolladen-Schneider
Flugzeugbau GmbH
Mühlstraße 10

D-6073 Egelsbach
Federal Republic of Germany

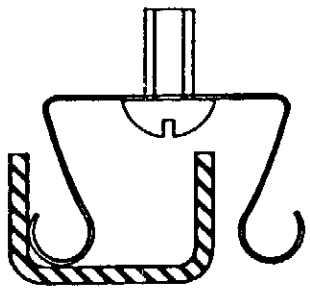
Accomplishment and log book entry:
Action to be accomplished by an approved service station and to be checked and entered in the log by a licensed inspector.

BIJAVE CANOPY Catches.

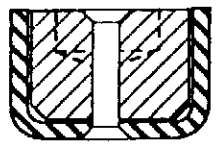
**MODIFICATION OF CANOPY CATCH FOUND ON SOME FRENCH GLIDERS e.g. Bijave and M200 etc.**



Cross-section of Bijave Canopy Lock with pressed steel catch located correctly in retaining clip.



Possible cause of unwanted canopy release in flight through rough air. The catch lever is incorrectly secured in the clip and the 'over-centre' action is not complete so that movement of the canopy could cause disengagement.



Modification of pressed steel lever to remove the possibility of incorrect fastening. A shaped steel insert is rivetted into the hollow side of the lever.
N.B. This must be drilled to clear the screw head which holds the spring clip in place or the 'over -centre' action will again be incomplete.

**Tony Moss 1/A/162ME**

Luftfahrt-Bundesamt
D-3300 Braunschweig

**Airworthiness Directive**

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

# 93-088 MT-Propeller

Date of issue: 01. April 1993

Affected propellers:
German Type Certificate No. 32.130/53
MTV-1-()

German Type Certificate No. 32.130/84
MTV-7-()

German Type Certificate No. 32.130/77
MTV-10-()

German Type Certificate No. 32.130/74
MTV-17-()

German Type Certificate No. 32.130/75
MTV-18-()

German Type Certificate No. 32.130/68
MTV-20-()

Note:
Propellers shipped after November 11, 1992 are not affected.

Subject:
Replacement of the electric motor of the propeller servo.

Reason:
On the affected propellers it is possible, that the magnet in the servo motor becomes loose, with the result, that the direction of rotation is reversed and that the propellers change unintended and automatically into feathering or max. coarse cruise pitch.

Action:
1. Installation of a placard per Service Bulletin No. 6 near the control unit.
2. Exchange of the electric motor on the propeller servo.

Compliance:
Propellers on motorgliders with Rotax 912 or Limbach L-2000-() engines until April 30, 1993. All other installations at next inspection, repair or overhaul, but not later than Oktober 31, 1993.

Technical publication of the manufacturer:
MT-Propeller Service Bulletin No. 7 dated January 11, 1993 which becomes herewith part of this AD and may be obtained from Messrs.

MT-Propeller Entwicklung GmbH & Co. KG
Airport Straubing
D-8441 Atting

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.

Luftfahrt-Bundesamt

# Lufttüchtigkeitsanweisung
# Nr.: 93-088

Aktenzeichen: I 144-303.61/93-088 Braunschweig, 01. April 1993

**Hinweis:**
**Nach § 14 der Betriebsordnung für Luftfahrtgerät wird nachstehende Lufttüchtigkeitsanweisung (LTA) erlassen. Ein durch sie betroffenes Luftfahrtgerät darf nach dem in der LTA angegebenen Termin, außer für Zwecke der Nachprüfung nur in Betrieb genommen werden, wenn die angeordneten Maßnahmen ordnungsgemäß durchgeführt worden sind.**
**Die unten aufgeführte ausländische Anweisung bzw. die Technischen Mitteilungen des Herstellers sind Anlaß zur Herausgabe dieser LTA und werden somit Bestandteil dieser Lufttüchtigkeitsanweisung. Wir weisen ausdrücklich darauf hin, daß Folge-Revisionen zu den Technischen Mitteilungen nicht automatisch zu dieser LTA gehören.**

**Durchführung und Bescheinigung:**
**Die Maßnahmen sind von einer nach § 31 der Prüfordnung für Luftfahrtgerät dafür anerkannten Stelle durchzuführen und zu bescheinigen. Die Vorschriften über die Führung der Betriebsaufzeichnungen gemäß § 15 der Betriebsordnung für Luftfahrtgerät sind zu beachten.**

93-088 MT-Propeller

Betroffene Propeller (11/Prop.):
Geräte-Nr.: 32.130/53
MTV-1-()

Geräte-Nr.: 32.130/84
MTV-7-()

Geräte-Nr.: 32.130/77
MTV-10-()

Geräte-Nr.: 32.130/74
MTV-17-()

Geräte-Nr.: 32.130/75
MTV-18-()

Geräte-Nr.: 32.130/68
MTV-20-()

Hinweis:
Nach dem 15.11.1992 ausgelieferte Propeller sind von den Maßnahmen dieser LTA nicht betroffen

| Betrifft | Technische Mitteilung des Herstellers | Maßnahmen |
|---|---|---|
| Verstelleinrichtung, Magnet im Stellmotor<br>- evtl. Loslösung des Magneten<br>- selbstständiges Verstellen des Propellers möglich<br>- Austausch des Elektromotors im Stellantrieb | MT-Propeller Entwicklung Technische Mitteilung Nr.: 7 vom 11.01.1993 | Gemäß den Angaben der Technischen Mitteilung |

**Fristen:** Verstellpropeller an Motorseglern ausgerüstet mit Rotax 912 oder Limbach L-2000-() Triebwerken: innerhalb von 14 Tagen nach Bekanntwerden dieser LTA. Alle übrigen Verstellpropeller, welche nicht an den o.g. Triebwerken installiert sind, müssen bei der nächsten Inspektion, Reparatur oder Überholung, spätestens jedoch bis zum 31.10.1993, umgerüstet werden.

Schempp-Hirth
Flugzeugbau GmbH
Krabenstraße 25 - Postfach 1443
D-7312 Kirchheim unter Teck
LBA-Nr. I B 5

TECHNICAL NOTE NO. 286 - 29
373 - 6
831 - 9
847 - 5



No. of Pages 2

Subject : "L'Hotellier" ball and swivel joints

Affected :

| Sailplanes | ATC No. | Ser.No. affected |
|---|---|---|
| Nimbus-3 | 286 | All |
| Nimbus-3/24.5 | 286 | All |
| Nimbus-3D | 373 | All |

| Powered sailplanes | ATC No. | Ser.No. affected |
|---|---|---|
| Nimbus-3T | 831 | All |
| Nimbus-3DT | 847 | All |
| Nimbus-3DM | 847 | All |

Urgency : See Airworthiness Directive (AD) No. 93-001 L'Hotellier

Reason : On the above aircraft, the locking plate of the quick-connectors must be secured according to AD No. 93-001 L'Hotellier.

On certain aircraft, however, the space may not be sufficient to secure the couplings connecting the control rods of inboard and outboard wing panels with the standard safety pin.

Such couplings must then be secured with the aid of a special Schempp-Hirth safety clip (which cannot be lost) to prevent a jamming of the controls.

It is further recommended to use this safety clip also for the fuselage-to-wing connections (instead of the standard safety pin).

Actions : 1. a) Attachment of the Schempp-Hirth safety clip to couplings connecting the control rods of inboard and outboard wing panels as per the attached working instructions.

b) Recommended attachment of the Schempp-Hirth safety clip to couplings connecting the control rods of the fuselage to those of the inboard wing panels.

/2

Schempp-Hirth
Flugzeugbau GmbH
Krabanerstraße 25 - Postfach 1443
D-7312 Kirchheim unter Teck
LBA-Nr. I B 5

A P P E N D I X

Technical Note No. 286 - 29
373 - 6
831 - 9
847 - 5



## Retrofitting Schempp-Hirth safety clips to "L'Hotellier" ball and swivel joints

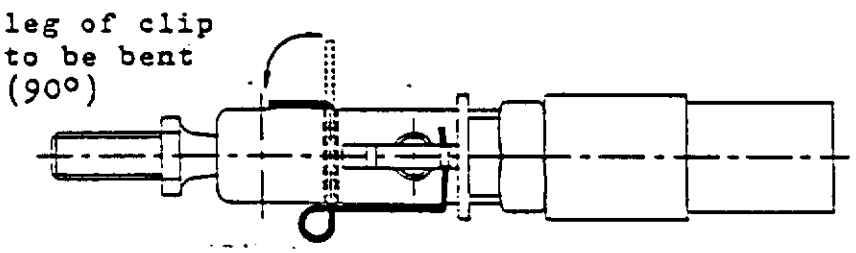
1. Direction of attachment and actuation of the safety clip on "L'Hotellier" control rod couplings:

   Locking slide vertical : Clip to be held from the rear

   Locking slide horizontal: Clip to be held from above

2. Note that there are clips for the port and for the starboard side.

   Slide long leg of safety clip through the hollow roller pin of the swivel joint until its loop contacts the latter, then bend protruding end as shown in the sketch (90°).

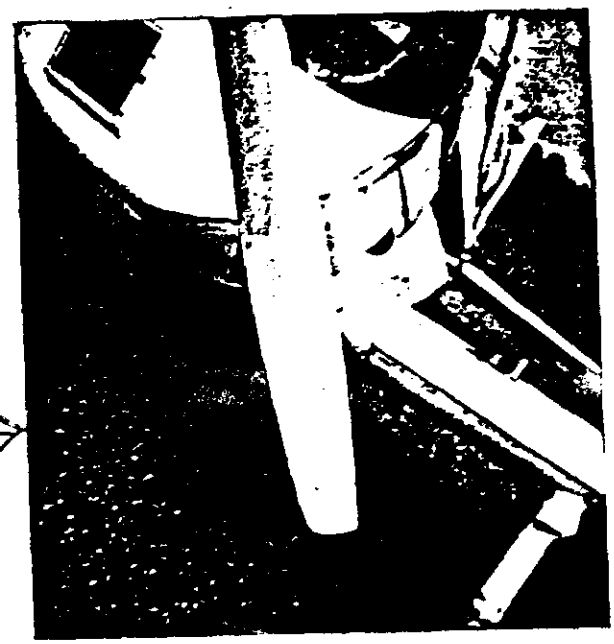



3. If necessary, rebend safety clip such that its position complies with the sketch showing the secured locking slide.

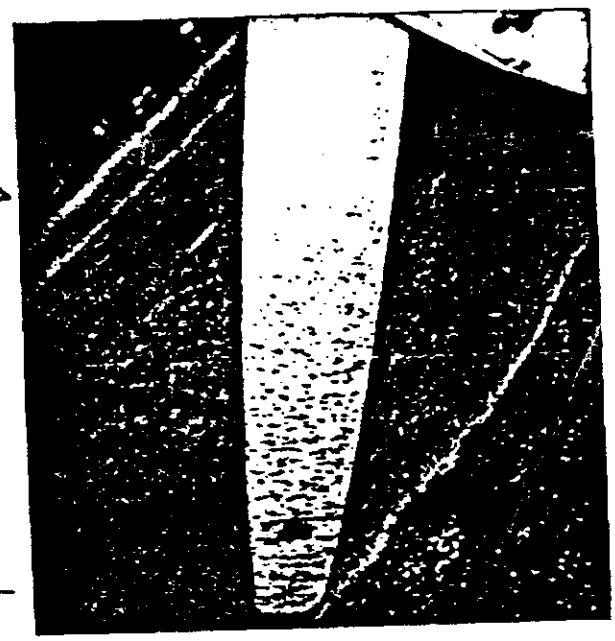
## Has to Maintain:-

## PROPELLER PERFORMANCE ?

FRONT SIDE - CLEAN.



REAR SIDE - BUG RIDDEN!



CLEAN Your Propeller's BACKSIDE, when you Clean your WINDSCREEN!

Pete Comfort

# 5. SPURIOUS TRANSMISSIONS USING HAND-HELD TRANSCEIVERS

P

GASIL has noticed, with considerable concern, that a regular entry in NOTAMs concerns unauthorised people making spurious transmissions using hand-held transceivers.

The most recent one concerns Newcastle Airport and the following was the entry observed by GASIL.

"Til 31 MAR 1100, unauthorised R/T transmissions have recently been experienced. A person unknown pretending to be local traffic and also Air Traffic Control has tried to countermand genuine instructions. Pilots experiencing such interference are requested to advise ATC Newcastle. In order to provide some form of integrity check, should any crew consider that an instruction is suspicious then they should ask ATC for their bearing and distance. This should then be checked against VOR/DME."

It is very difficult to give clear definitive advice to pilots, and air traffickers, as to what to do when confronted with what may well be spurious transmissions. The advice given by Newcastle Air Traffic clearly can only work if an aircraft is fitted with a VOR/DME.

Should any pilot, or air traffic controller, become aware of a person or persons who are operating such hand-held receivers in these circumstances, they should report the matter immediately. Safety Promotion has just been contacted by a Midlands airport where a transceiver has fallen into the wrong hands following a break-in to a car.

# 6. AERONAUTICAL CHARTS

P

A number of changes to regulated airspace in South and Southeast England will become effective on 22 July 1993.

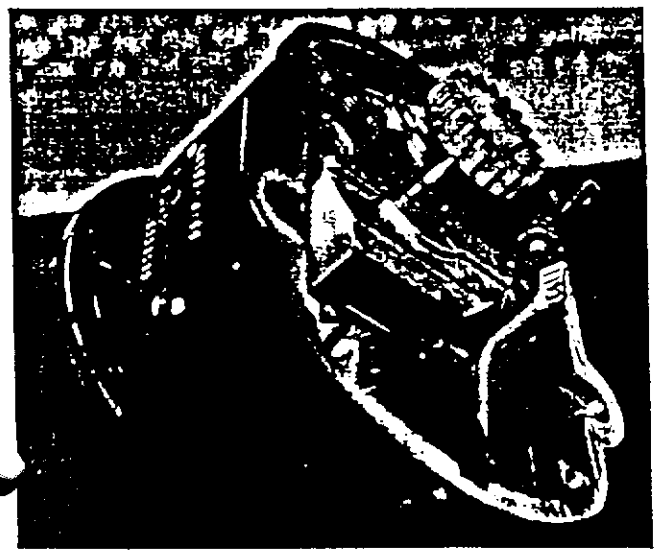
Because of the importance of these airspace revisions, and in order to incorporate them on aeronautical charts at the first opportunity, publication of sheet 2171 CD Southern England and Wales edition 19 has been postponed until July 1993. Any inconvenience to chart users is regretted.

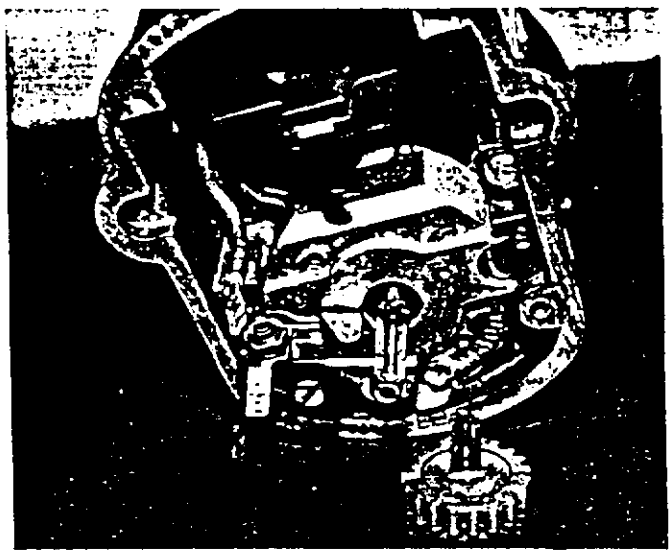
# E4. MAGNETO CAMSHAFT CRACKED SLICK. 500 HR INSPECTION.

| | | |
|---|---|---|
| Aircraft type | : | Piper Archer |
| Date | : | October 1992 |
| Engine type | : | Lycoming O-360, Magneto Slick 4270 |

During the course of a routine check, the Manufacturers recommended 500 hours inspection was carried out on the magnetos. When the right magneto was removed for inspection, the camshaft was found to be cracked 50% through. As the shaft is fork shaped to take the plastic cam, it was possible to remove the drive cog complete with half the camshaft. This occurrence reinforces the need for the 500 hour inspection, as this was the first one due on this magneto.

The photo shows the extent of the deterioration.





# 12. STARTER MOTOR FAILURES

P/E

| | | |
|---|---|---|
| Aircraft type | : | Piper PA25 Pawnee |
| Date | : | (Various) |
| Engine type | : | Lycoming O-360 |

GASIL is grateful to a gliding club for the following contribution.

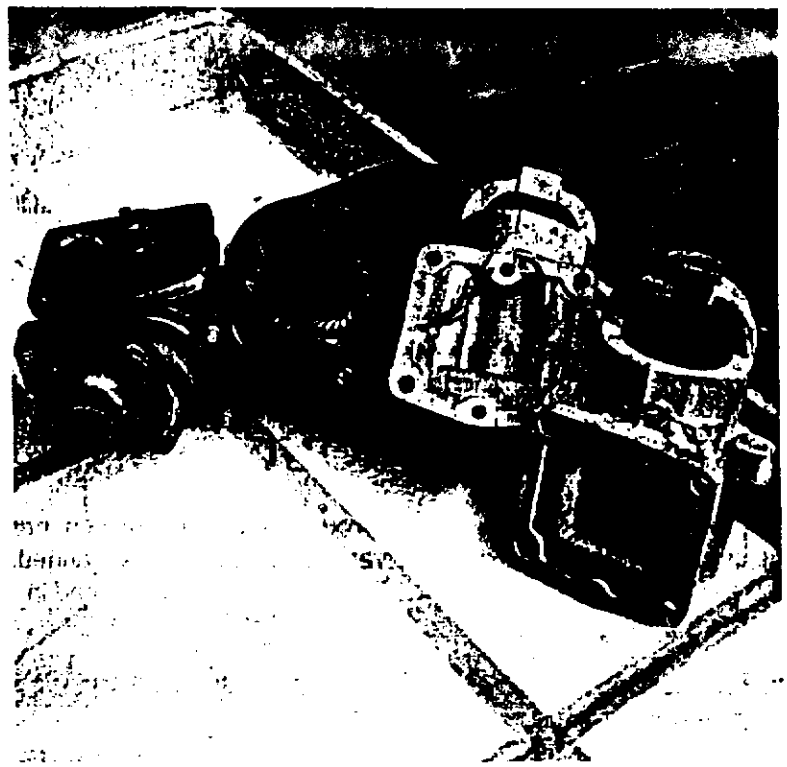
"In clearing out a collection of scrap components, I thought that you may be interested in the three starter motor mountings that have failed on the Club Pawnee.

On this type of starter, if the battery is low, the starter engages but fails to start the engine and the Bendix cannot then be dis-engaged before the engine is hand swung. If a hand start is then attempted with both magnetos selected instead of just the impulse, then the engine will rotate backwards when it fires and destroy the starter bracket. This was certainly the cause of the two failures at the top flange.

Where the failure occurred at the front plate of the motor, the engine was turning on the starter, but slowly. However it was subsequently found that the Impulse Mag was defective.

Perhaps it is worth including in the safety talks the importance of listening for the impulse mag operating when pulling the engine through before the first start of the day as part of the DI and to emphasise the potential danger of attempting to hand swing the propeller with both mags selected to ON. Even with the Bendix out of mesh a nervous swing will usually cause reverse rotation of the prop.

While all this was well known in the Tiger Moth days, it is no longer a routine with "car type" starting switches."



CAA COMMENT:

In the photograph, two of the brackets have subsequently been used as practice pieces for a welding course - there being no intention to return these to aviation use, their simply being useful piece of scrap cast aluminium which could be used for training purposes.

See also GASIL 5/92, Item E1.

BGA COMMENT! WHY NOT FIT A BENDIX KEY Switch?