THE GLIDING FEDERATION OF AUSTRALIA

GFA AD 280
(ISSUE 5)

GFA AIRWORTHINESS DIRECTIVE

TYPES AFFECTED:
H 401 Kestrel
T59 Kestrel all variants
H301B Libelle
Standard Libelle
Standard Libelle 201B

SUBJECT:
Cracking of the lower rudder hinge/control yoke.

BACKGROUND:
During December 1984 a Kestrel rudder yoke failed during flight. As a result of the first inspections required by Issue 1 of this AD a Libelle was found to be cracked. Since the Glasflügel designs of various types have similar yokes these should be inspected carefully. The manufacturer improved the design of the yoke for the H 401 Kestrel and the replacement of the yoke became compulsory overseas.

A number of factors affect the formation of cracks in this part. Heavy landings or ground loops place significant extra stress on this part. Incorrect rudder system stops and an excessively tight fit of the stem of the yoke where it passes through the rudder create unnecessary extra stress, too.

This issue of AD 280 removes the Club Libelle, Hornet variants, Mosquito variants and H 304. These aircraft are now covered by ADs 584 and 585.

This AD still applies to those aircraft listed above under "types affected".

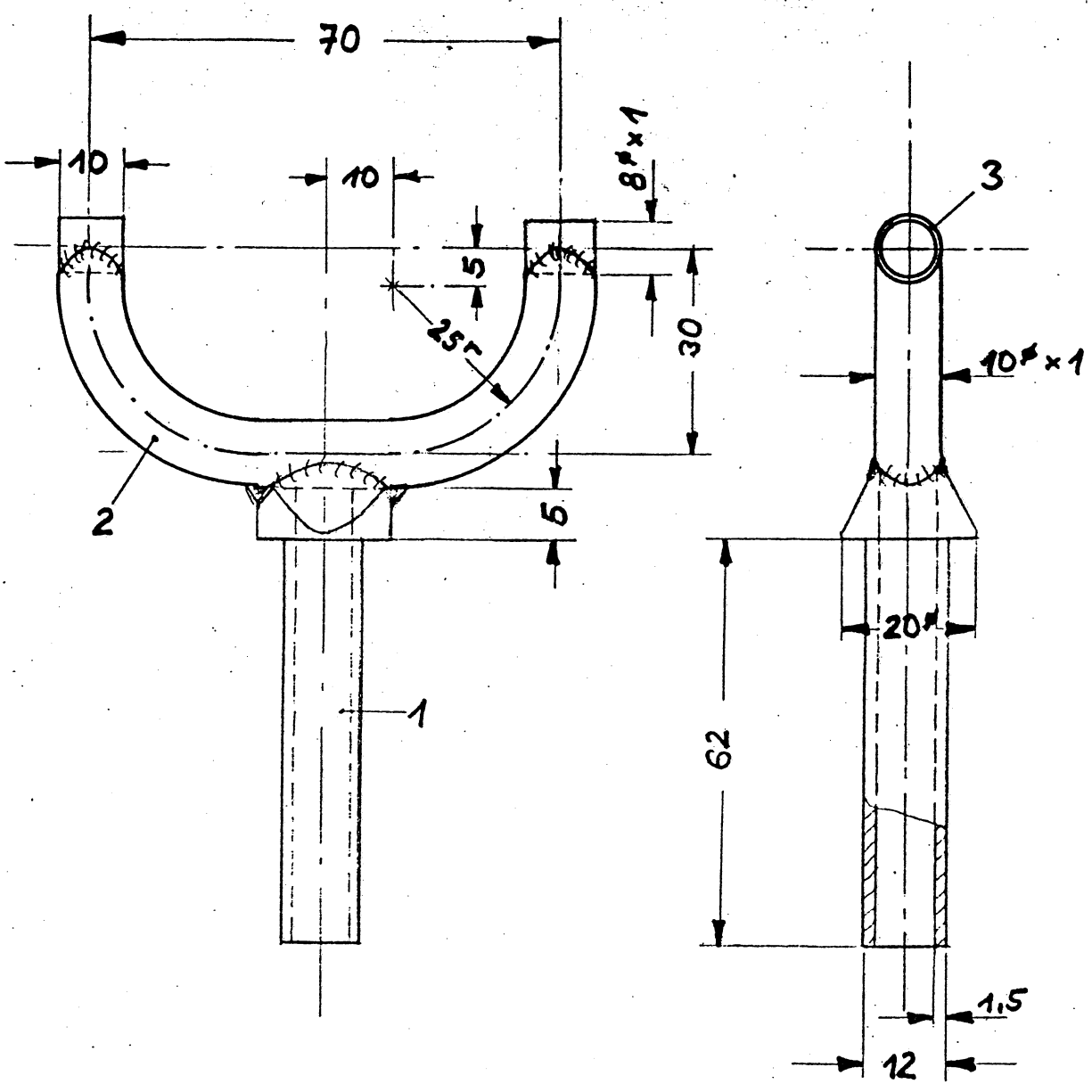
DOCUMENTATION:
Technical Note No. 401-19 which herewith becomes part of this AD.

ACTION REQUIRED:
1. All types: a) At each Annual Inspection the rudder control yoke must be inspected for cracks using magnifying glasses. b) It is recommended that this inspection be completed after every heavy landing. Write a note in Part 1 of the Maintenance Release to inform Daily Inspectors about this AD for appropriate action after a heavy landing.

SIGNED:
SENIOR TECHNICAL OFFICER AIRWORTHINESS

For and on behalf of:
THE GLIDING FEDERATION OF AUSTRALIA

Bei nicht tolerierten ..
DIN 7168 Genauigkeitsgrad m.i.



Im WIG-Verfahren mit Zusatzwerkstoff 1.7734.2 geschweißt. Grundiert mit Wash-Primer 42002 + Härter 40018. Decklackierung mit Nitro-Lack grau RAL 7003.

Spannungsfrei geglüht bei 580°C 4 Std. unter Schutzgas

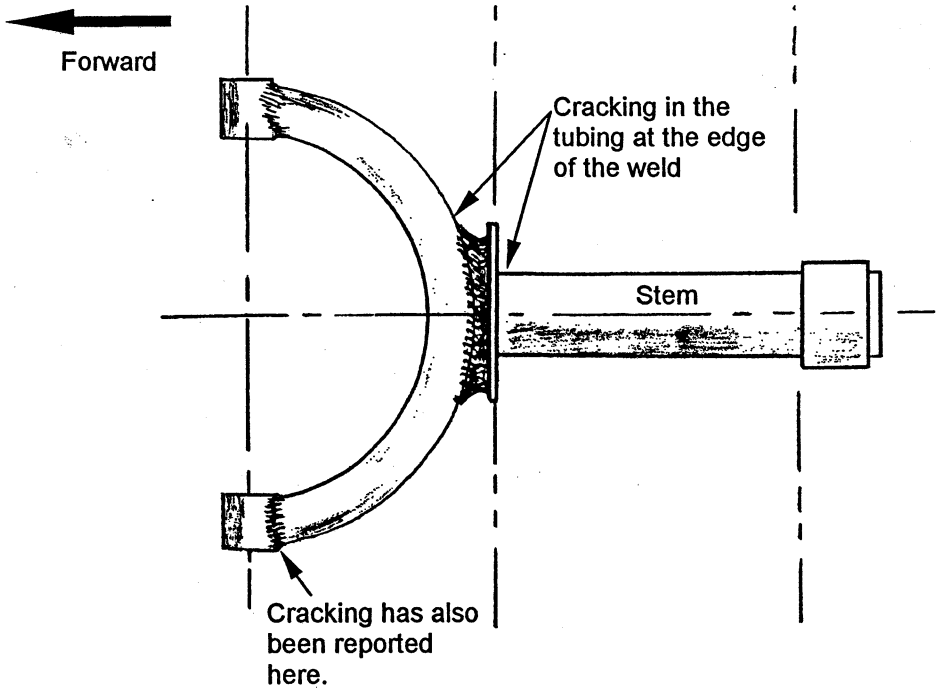
Pos. Nr.	Stückzahl	Benennung	Werkstoff	Zchn. Nr. / Abmch.	Gewicht
1	1	Lenkerfinger	1.7734.4		
2	1	Bügel	1.7734.4		
3	2	Büchse	St 35		

MUSTERUNTERLAGEN

	M 1:1	Ruderlenker	301-45-13	12.9.1986 Steinmeier

2. During the annual inspection it is important that the rudder system stops be correctly set and the stem of the yoke be checked to have a sliding fit where it passes through the rudder in any possible position due to rudder deflection.

3. Types H 401 Kestrel and T59 Kestrel all variants must be fitted with improved actuator arm according to Technical Note No. 401-19.



WEIGHT AND BALANCE: Not affected.

IMPLEMENTATION: Materials may be obtained from:
Glasfaser Flugzeugservice GmbH
Hofener Weg
72582 Grabenstetten
GERMANY
Fax: +49 7382 1629
e-mail: streifly@aol.com

COMPLIANCE: The requirements of this AD may be completed by persons rated as Annual Inspectors any type. Action 3 to be performed before 31. May 2000. Kestrels which comply with Technical Note No. 401-19 are excempt from this AD.

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.

Hansjörg Streifeneder
Glasfaser-Flugzeug-Service GmbH
LTB II-A 95 u. I-C 12
Hofener Weg, Tel. 07382/1032
7431 Grabenstetten

TECHNICAL NOTE NO. 401 - 19

No. of pages 03

Note : Replacing the actuator arm must be done by Streifeneder Glasfaser-Flugzeug- Service GmbH only or by an approved repair station.

Only genuine parts made in accordance with drawing No. 301-45-13 must be used.

Proper accomplishment of the action must be entered into the sailplane's log book by a licensed inspector.

Supply source : Hansjörg Streifeneder
Glasfaser-Flugzeug-Service

Hofener Weg
7431 Grabenstetten

FEDERAL REPUBLIC OF GERMANY

Grabenstetten, September 12.09.1986

Issued: H. Streifeneder
(Streifeneder

LBA-approved:

17. 10. 86

Hansjörg Streifeneder
Glasfaser-Flugzeug-Service GmbH
LTB II-A 95 u. I-C 12
Hofener Weg, Tel. 07382/1032
7431 Grabenstetten

TECHNICAL NOTE NO. 401 - 19

Affected : Sailplane model "Kestrel"
F.R.G. Type Certificate No. 276
- all serial numbers -

Subject : Rudder gimbal drive
- rear actuator arm -

Reason : Failure of the actuator arm caused by loads applied when regularly lifting the fuselage by its rudder. and/or when fuselage has broken.

Urgency : The actuator arm must be replaced not later than March 31st, 1987.

Actions : The faulty part, made according to drawing No. 301-45-10, must be replaced by an improved actuator arm, made in accordance with drawing No. 301-45-13.

Working instructions:

1. Remove rudder by disconnecting the tail chute, removing the M4 bolt securing the actuator arm to the rudder (located in a cavity at the lower end) and detaching the fairing between the two elevator halves.

2. Remove horizontal axle from gimbal drive by removing the castellated nut.

3. Remove both castellated nuts from rudder actuator arm and pull mounting bolts inwards and off.

4. Attach new actuator arm to gimbal drive by re-inserting mounting bolts. Make sure that bolts are fully home so that bolt heads contact inner face of diagonal bushings - also take care that the actuator arm shows no axial play when seated on these bolts, then only tighten castellated nuts lightly and secure with split pin.

Hansjörg Streifeneder
Glasfaser-Flugzeug-Service GmbH
LTB II-A 95 u. I-C 12
Hofener Weg, Tel. 07382/1032
7431 Grabenstetten

Actions (ctd.)

5. Re-attach rudder gimbal drive to its mount on the lower end of the fin by inserting the horizontal axle with its spacers. Tighten castellated nuts lightly and secure with split pin. Again, make sure that, with the assembly completed, there is no axial play, if so, proper shims must be used to eliminate the play.
   On the other hand, by overtightening the castellated nuts, stiffness or deformation of the rudder drive or a misalignement of its axles may occur.

6. Re-attach rudder and tape it to fin when in proper position to avoid any aft movement.

7. Slide flange bushing onto actuator arm and secure in position by a wedge placed between bushing and cavity wall. Make sure that the bushing's 4 mm holes are horizontal.

   Punch mark actuator arm on both sides at the center of the bushing's 4.0 mm holes and drill arm to a diameter of 2.0 mm. With these holes properly aligned, drill to a diameter of 3.8 mm, then ream to 4.0 mm. If the 2.0 mm holes are not aligned, it is possible to use a round needle file for centering, then drill and ream to proper diameter.

8. Insert locking bolt and secure with M4 stop nut.

Materials :

1 off rudder actuator arm made according to drawing No. 301-45 - 13

1 off M4 stop nut
3 off Split pins, 1.5 x 16 mm

Weight and C/G position :

Difference negligible