

AIRWORTHINESS DIRECTIVE

Issue 1

TYPE AFFECTED:

SZD-9 BOCIAN 1E SAILPLANES

SUBJECT:

Crack inspection of elevator actuating rod fork end.

BACKGROUND:

Manufacturers Service Bulletin Nr BE-025/82 Bocian 1E requests inspection of the steel fork end fitting forming part of the pushrod connecting the elevator to the quadrant on Fuselage frame 25.

The above bulletin makes up Sheets 2, 3, 4, 5 & 6 of this A.D.

REQUIRED ACTION:

(Overriding Bulletin required actions)

(1) **BEFORE NEXT FLIGHT**

Remove and inspect the fork end for cracking as outlined in the Service Bulletin.

Check that the elevator travel up and down is correct and no binding exists between the quadrant and the inside of the fork end.

Note: If cracks are found, or the threaded section is bent, a new fork must be fitted before further operation.

(2) **Form 2 Inspection**

Repeat the above inspection at each Form 2 annual inspection.

Note: This annual inspection need not apply to new forks replacing cracked forks, where proper fork/quadrant clearance exists.

IMPLEMENTATION:

This A.D. may be carried out by any C. of A. inspector.

LOG BOOK:

Full details of inspection/re-rig/replacement to be entered into the log book.

COMPLIANCE:

The requirements of this Airworthiness Directive are mandatory. This Directive is issued pursuant to Air Navigation Regulations under the delegated authority of the Secretary of the Department of Aviation.

Issued by:

Chief Technical Officer
Airworthiness

10/10/1983

For and on behalf of:

GLIDING FEDERATION OF AUSTRALIA

Sheet 1 of 6

BULLETIN NR BE-025/82 "BOCIAN 1E"

Ref.: Inspection of condition of fork-end with groove of elevator control circuit push-rod on SZD-9 bis 1E "BOCIAN 1E" gliders.

Way of introducing: Introduce immediately after being supplied with this Bulletin.

Elaborated in: PDFS "PZL BIELSKO" on Nov. 15, 1982

This text is the translation of Polish version approved by CACA

1. Grounds for introducing this Bulletin

This Bulletin is introduced due to the crack of threaded part of steel fork with groove end of elevator control circuit push-rod which was found during a periodic inspection. This Bulletin requires the inspection of above mentioned push-rod and orders the service directives aimed to eliminate the possibility of damage of the push-rod end.

2. List of gliders covered with this Bulletin

This Bulletin covers all gliders of SZD-9.bis - 1b "Bocian 1B" type /Fact. Nos P-425 to P-735/.

3. List of enclosures

To this bulletin the following items are enclosed:
Fig. 1 and Fig. 2 showing the scheme of the fraction of particular control circuit and the location of an eventual failure.

4. Program of push-rod inspection

To inspect the push-rod:

- 4.1. Disassemble the push-rod out of the elevator lever.
 - 4.2. Disassemble the connection of push-rod fork end with the lever on the frame No 25. Take out the push-rod. If the push-rod end engages the above mentioned lever during the normal elevator deflection /traces on lever/ the end may be filed as shown on sketch Fig. 2.
 - 4.3. Dissecure and screw out the fork end /remember to mark its original alignment in respect to control circuit adjustment/.
- Pay attention that the end is not bent in. The bent end is not allowed to be aligned but the new one shall be installed.

- 4.4. Degrease the end in gasoline and inspect /using the 5 times magnifying glass/ the threaded part of the end particularly on the groove side and pay attention for cracks at the thread root. In case the cracks were found the new end shall be installed.
- 4.5. Reassemble the push-rod and check the correct elevator deflections.

5. Service directives

On base of the observations it has been found that the reasons of damages of fork-end may be the following:

- 5.1. The incorrectly adjusted length of the rudder control cables results the contact of the steel fork end of push-rod with the lever on frame No 25, when the elevator is deflected down. Inspect the lever for lack of traces of end to lever contact. This trace informs that the end is additionally bent what is restricted..
- In such a case the adjustment of cables for the correct elevator deflections should be checked.
- The collision of end and lever shall be avoided.
- The small fileing of lever edge at 45° is allowed but it must be protected with pen for metal /see fig. 2/.
- 5.2. Transportation of glider on a rough ground when the elevator mass forces result that the end beats on the lever on frame No 25. To avoid the above one of the control sticks in cockpit should be immobilized by means of safety belts so to retain the elevator nearly its neutral position what prevents this end to lever beating.
- 5.3. Ground transportation of the disassembled glider on the trailer. In this case the elevator push-rod shall be immobilized against a vertical movement of free end as a consequence of inertis forces.

6. final statements

The inspection of condition of fork end is performed by the user himself.

The inspection and eventual replacement on the end should be notified in the glider documents as the execution of this Bulletin.

- THE END -

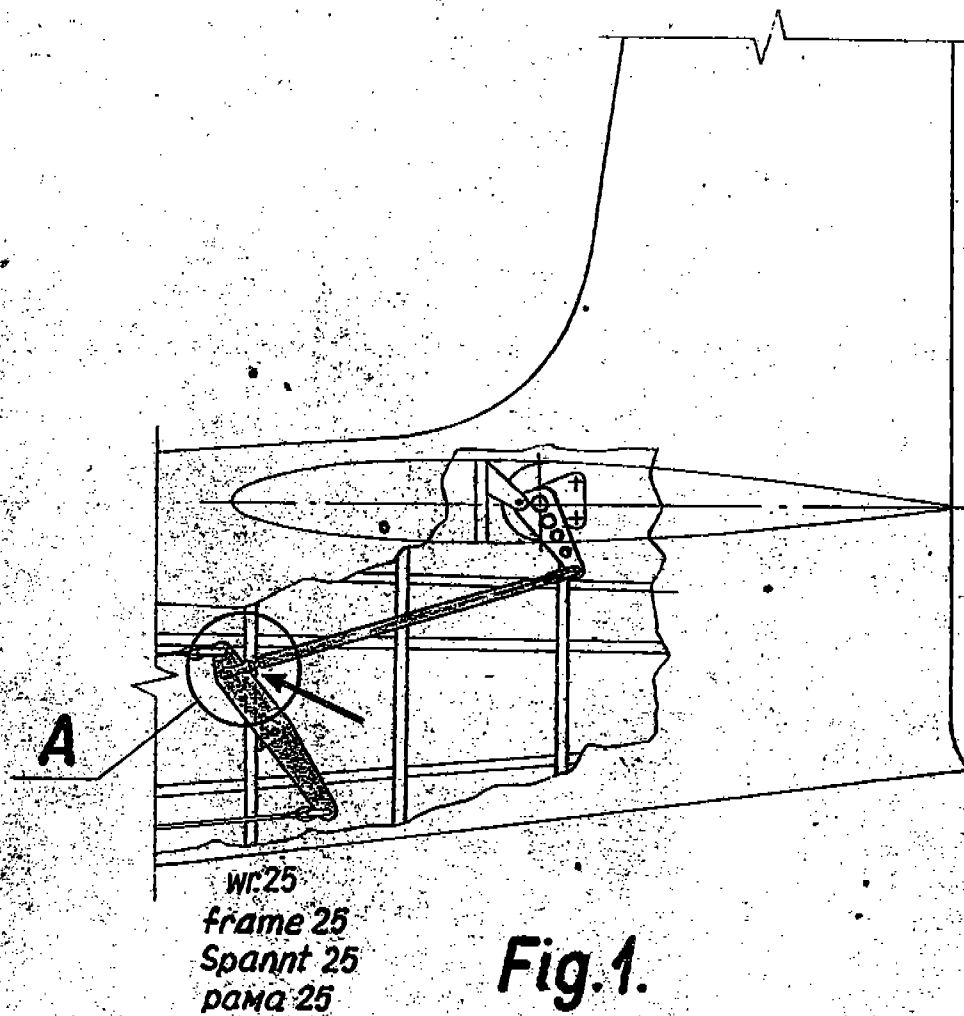


Fig.1.

location of appearing of cracks
Stelle der Rissbildung
место возникновения трещин

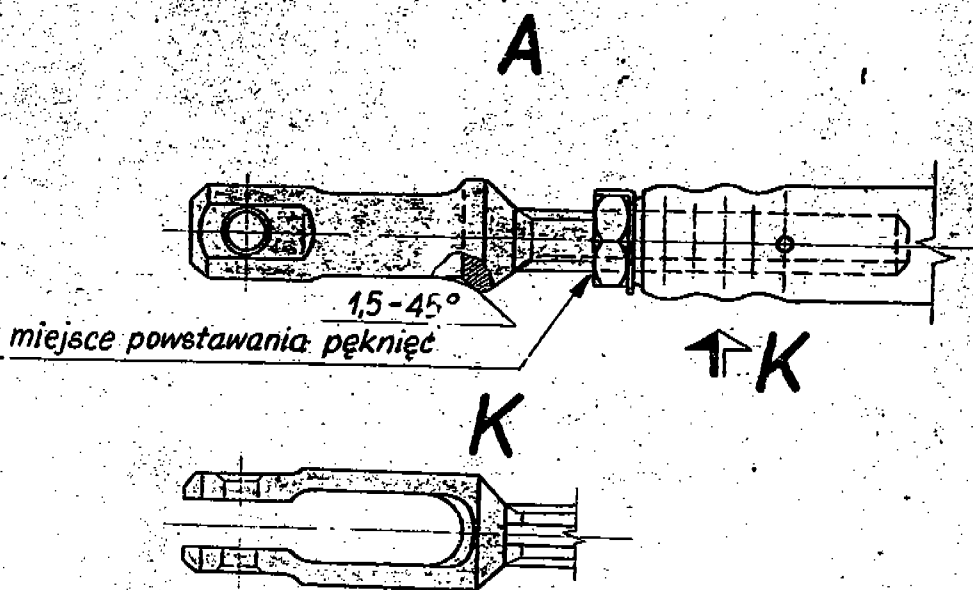


Fig.2.