



ALLSTAR PZL GLIDER
Sp. z o. o.
ul. Cieszyńska 325,
43-300 Bielsko-Biala, Poland
tel.: +48 33 812 50 26
fax: +48 33 812 3739
techsupport@szd.com.pl
www.szd.com.pl

SERVICE BULLETIN

Allstar PZL Glider considers compliance mandatory

BE-062/SZD-50-3/2013 „PUCHACZ”

DATE: September 16, 2013
SUBJECT: Inspection of torque tube in air-brake control system
MODELS AFFECTED: All S/N of SZD-50-3 „Puchacz”
TIME OF COMPLIANCE: After receiving the SB

NOTE

Incomplete review of all the information in this document can cause errors. Please read the entire SB to make sure you have a complete understanding of the requirements.

1. BASEGROUND OF THE SB:

The mandatory bulletin BE-052/SZD-50-3/2003 „PUCHACZ”, issued in 2003, did not enclose the information about repetitive inspections of torque tube air-brake control system in the fuselage, as well as did not cover the information about processing method after exchanging of infected tube with the new one, equipped with reinforced corner.

This SB replaces the BE-052/SZD-50-3/2003 „PUCHACZ” and – additionally – specifies the above information.

Up to 2003, during the flights, while operating the airbrakes, a few incidents of the torque-tube break-off from the lever located in fuselage, had been experienced. The damages occurred at the welded joint between the tube and the lever, which did not allow to retract the airbrake.

Possible reason could be a fatigue in the area of frequent occurrence of striking load, exceeding recurrently the established value or/and corrosion detected inside the area of opened tube.

2. COMPLIANCE WITH SB REQUIREMENTS

(a) Conditions of inspection:

- for the gliders still equipped with the old version of torque tube, with or without reinforced corner, do as follows (see Sketch 1):
 - annually or during „100-hrs” inspection, in case of whichever occurs first, inspect the welded joint of airbrake torque tube, acc. to the description specified in item 2(b) of this SB;
- for the gliders with the new type of torque tube with reinforced corners (see Sketch 2), i.e. the gliders from S/N 503.A.03.001 and up as well as others with the new type torque tube (see Sketch 2) do as follows:
 - annually or during „100-hrs” inspection, whichever occurs first, check visually (disassembling of the tube from the fuselage is not necessary) the welded joint of the torque tube. Inspection of the areas partially obscured by the reinforcing plates is not required.
 - during „1000-hrs” inspection check the welded joint of torque tube as described in 2(b) of this SB.

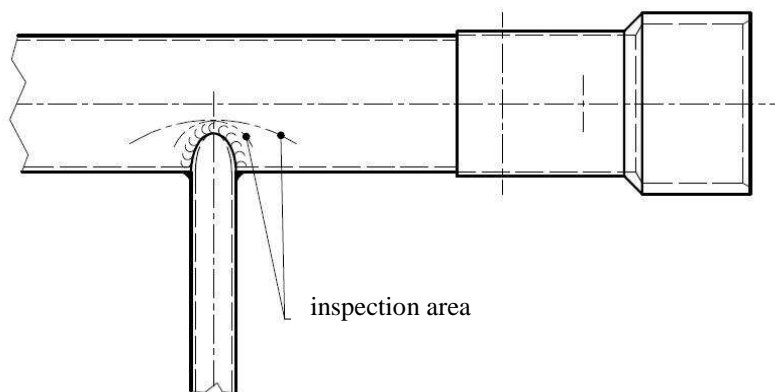
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(b) Inspection procedure:

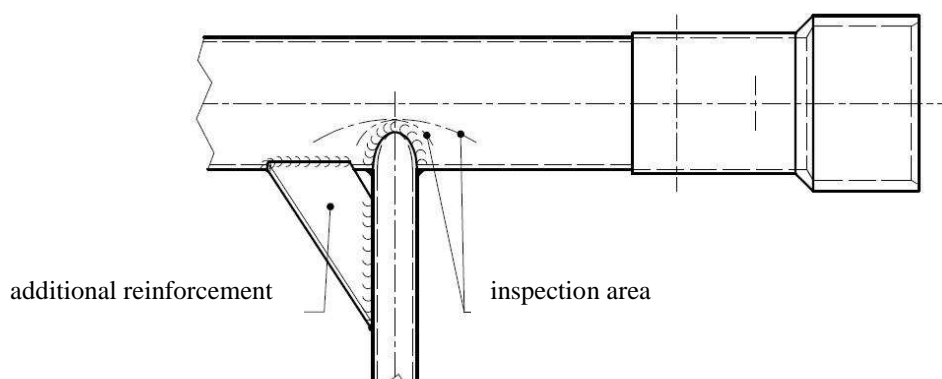
1. Dissassemble the glider.
2. Remove the torque tube of airbrake control system (Fig. 9, item 8 – TSM, issue III/Sept. 1980 or Fig. 8/2, item 8 – TSM, issue I/JAR-22/Nov. 1994).

To do so, proceed as follows:

- remove the rear seat panel;
 - remove the side and rear wall of baggage compartment. The side wall is fastened in front with 2 screws to main frame, and the rear wall with 2 screws to baggage compartment wall;
 - disconnect the torque tube from airbrake push-rod (Fig. 9, item 9 – TSM, issue III/Sept. 1980 or Fig. 8/2, item 9 – TSM, issue I/JAR-22/Nov. 1994);
 - remove the end of torque tube on lever’s side (Fig. 2, item 6 – TSM, issue III/Sept. 1980 or Fig. 1/2, item 6 – TSM, issue I/JAR-22/Nov. 1994);
 - take the torque tube out of the fuselage, raising it up and forward.
3. Check the condition of torque tube in the area of welded joint with lever (as well as the additional reinforcing plates) – see the Sketch 1 or Sketch 2, dependently on the existing solution:
 - Check with the 3 x min. magnifying glass for paintig cracks and tube’s condition in the area of welded joint (also reinforcing plates), which could be an evidence of joint and/or tube cracking. If found the cracks of paint, remove coating and check the surface of tube. Fluorescent Penetrant Inspection (FPI) inspection may be done as an optional.
 - Check the torque tube for permanent distortion of cylindrical tube’s shape.



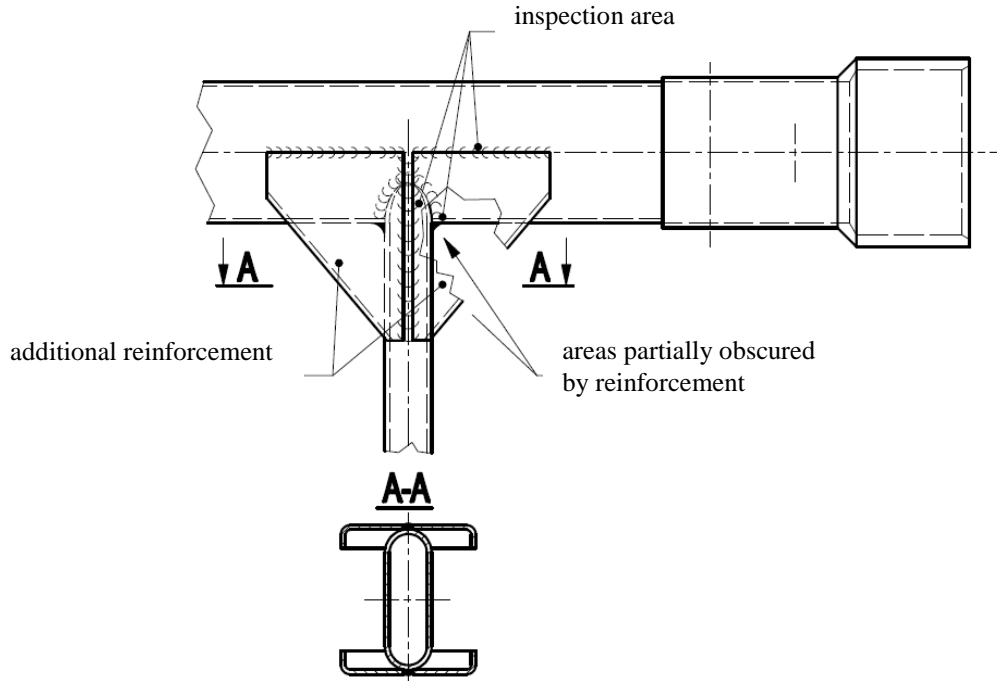
a)



b)

*Sketch 1 – Previous version of airbrake torque tube:
a) without reinforcement; b) with a single reinforcement*

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Sketch 2 – New version of reinforced torque tube

4. Check for evidence of corrosion of the inside welded joint area of torque tube.

(c) Post-inspection procedure:

1. Cracks, permanent distortion of torque tube as well as corrosion pit on tube's inner side in the area of welded joint are not acceptable. In case of one of the defects listed above – replace the tube with the new one, purchased from Allstar PZL Glider – item no. 503.64.30.00A. The old tube may be released into service if no one of described defects exists.
2. Slight, uniform corrosive deposit should be removed with fine abrasive sand paper (grid 600 at min). If no corrosive pits are present on the surface, prevent inner area of the tube with anticorrosive agent (for ex. Fluidol) and release the tube into service. However, replacement the tube with the new one could be recommended.

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