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SERVICE BULLETIN

BE-001/54-2/2018

Allstar PZL Glider considers compliance mandatory.

MODELS AFFECTED: SZD-54-2 „Perkoz”

SERIAL NUMBERS AFFECTED: 542.A.11.002, 542.A.14.003, 542.A.14.004; 542.A.14.005; 542.A.14.006; 542.A.15.007; 542.A.15.008; 542.A.15.009; 542.A.15.010; 542.A.15.011; 542.A.16.012; 542.A.16.013; 542.A.16.014; 542.A.16.015.

SUBJECT: Additional securing of bushings on the wing's fittings as well as fitting of horizontal stabilizer.

COMPLIANCE TIME: After receiving of this SB.

ELABORATED BY
Responsible for Type Design

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Marian Krocze, Msc. Eng.

APPROVED BY
Executive Manager

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Issued			Revised			Rev.
YEAR	DAY	MONTH	YEAR	DAY	MONTH	
18	12	2018	-	-	-	-

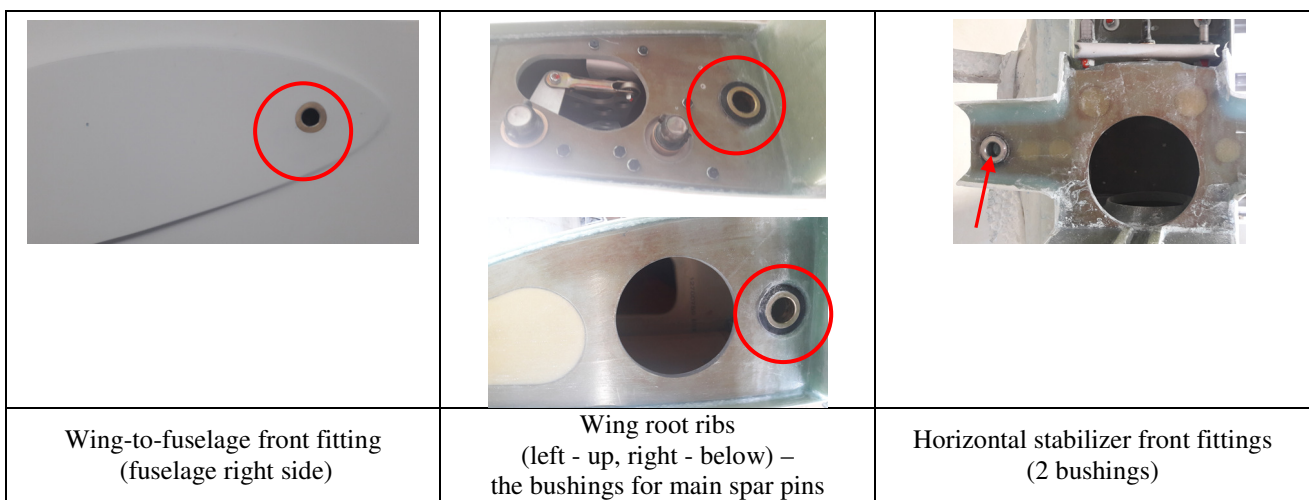
1. GROUNDS FOR INTRODUCTION OF THIS BULLETIN

It has been found onto a few SZD-54-2 that the exchangeable bushings on the wings fittings and the horizontal stabilizer front fittings are able to move out from their nests (see Pic.1).

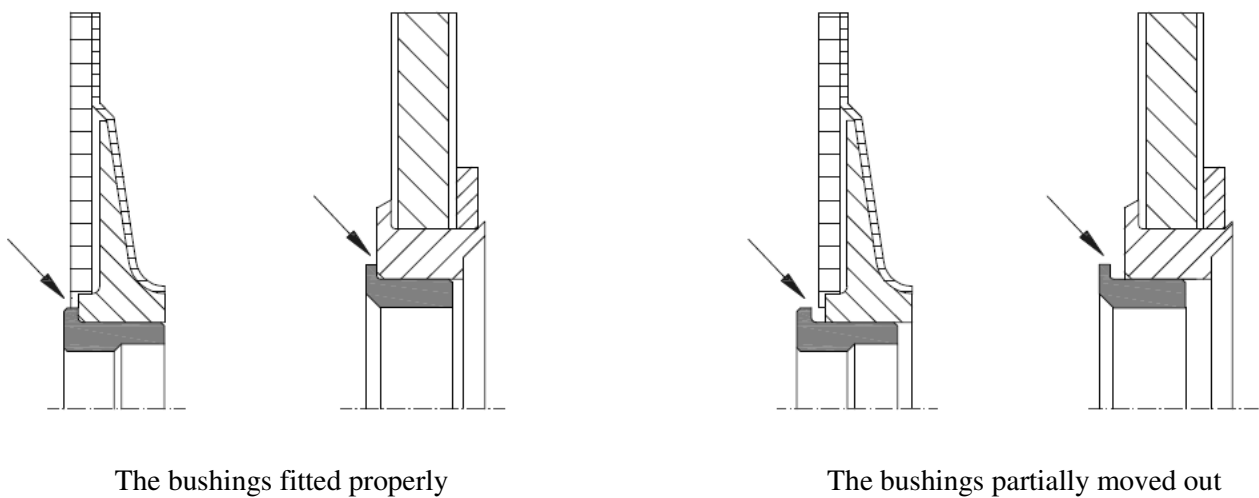
This is because of axial forces in joints, which may appear during in-flight operation and while derigging the sailplane.

In case of moving out in flight of both (or one) bushings from the wing-to-fuselage front fitting, it will have a negative impact onto quality of joints of assemblies, and will lead into perceptible and hearable playing of fitting, which is a flight safety issue.

Rigging the glider without these bushings, if lost during prior derigging (on the ground), is to be treated as serious hazard for further flight safety.



Pic. 1 Identification of elements



Pic 2. Two examples of bushings fitted properly and partially moved out

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18	12	2018	-	-	-	-

2. SERIAL NUMBERS AFFECTED

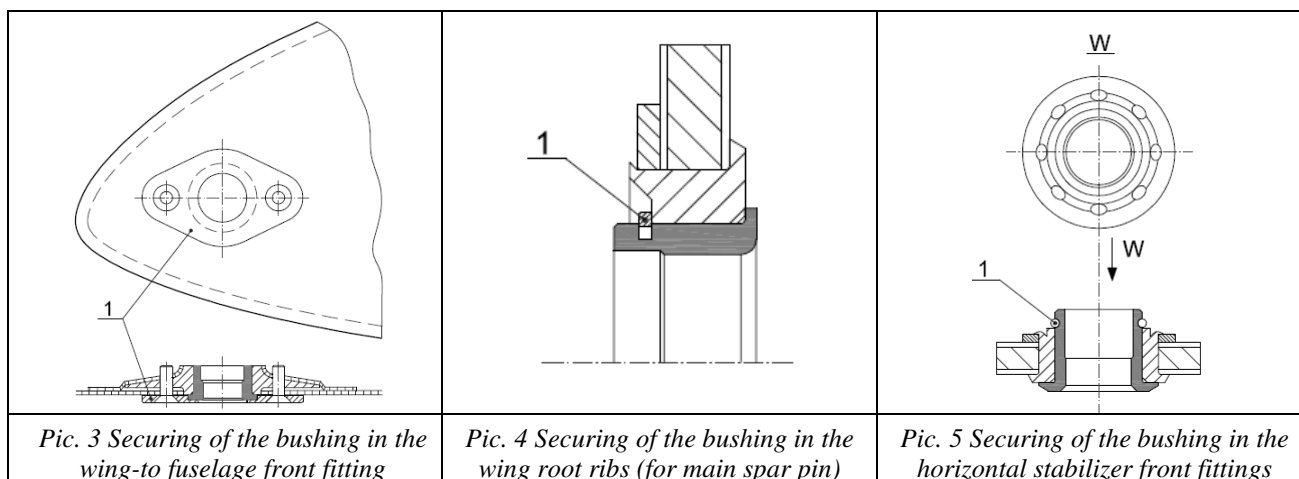
542.A.11.002; 542.A.14.003; 542.A.14.004; 542.A.14.005; 542.A.14.006; 542.A.15.007;
542.A.15.008; 542.A.15.009; 542.A.15.010; 542.A.15.011; 542.A.16.012; 542.A.16.013;
542.A.16.014; 542.A.16.015.

3. REQUIRED ACTIONS

To eliminate the occurrence described in item 1, additional securing on bushings has been introduced. The Minor Change defining this new design solution has been approved by EASA (Minor Change Approval 10067918).

Before next flight, derig the glider and check the mounting of bushings on the wing-to-fuselage front fitting nests, at root ribs on both wings, as well as at horizontal stabilizer fittings – see Pic. 1 and Pic. 2.

- 3.1 In case of any bushing in the wing-to-fuselage front fittings is found loose or moved, remove (reject for scrap) the bushing and replace it with the new one 542.44.10.02A. Than secure it with a metal cover plate 542.44.11.00A, as shown on Pic. 3, item 1.
- 3.2 In case of any bushing at wing root ribs is found loose or moved, remove (reject for strap) the bushing and replace it with the new one 542.14.36.00A. Each of such bushing has been equipped with securing ring, as shown on Pic. 4, item 1.
- 3.3 In case of any bushing on the stabilizer front fitting is found loose or moved, remove (reject for strap) the bushing and replace it with the new one 542.44.32.00A. Secure it with securing ring $\phi 16$ DIN 7993A (FABORY 36215), as shown on Pic. 5, item 1.



Issued			Revised			Rev.
YEAR	DAY	MONTH	YEAR	DAY	MONTH	
18	12	2018	-	-	-	-

- 3.4 The bushings in the wing-to-fuselage front fittings, provided they are found not loose nor moved, should be secured with metal cover plates as described in the item 3.1, but without necessity of bushing replacement, not later than 100 FH after the date of this Bulletin receiving.
- 3.5 The bushings described in items 3.2 & 3.3, even if they are found not loose, should be replaced with new ones (secured) not later than 100 FH after the date of this Bulletin receiving.

4. HOW TO REMOVE AND INSTALL THE BUSHINGS

To remove the bushings an appropriate device (like for bearings replacement) should be used, based on the diameters of bushings, or any similar device.

Do not use hammers nor any other striking method.

To remove the bushing it is also permissible to cut it along its wall, in one or two places. Do it carefully, do not damage the corresponding nests.

4.1 Wing-to-fuselage front fittings

Put the metal cover plate (item 1, Pic. 3, P/N 542.44.11.00A) coaxially on the bushing flange (at the fuselage), with holes for screws placed on line parallel to the fuselage root rib chord.

Through the holes in the cover plate, mark holes for screws. Drill holes $\phi 4,2$ mm and cut a thread M5. Fix the cover plate with M5 screws, secure screws with *Loctite 243*.

Possible play between the bushing flange and the cover plate inner side should be eliminated with spacer washers 20 x 28 mm, for ex. acc. to DIN 988.

4.2 Bushings in the wing root ribs (for main spar pins)

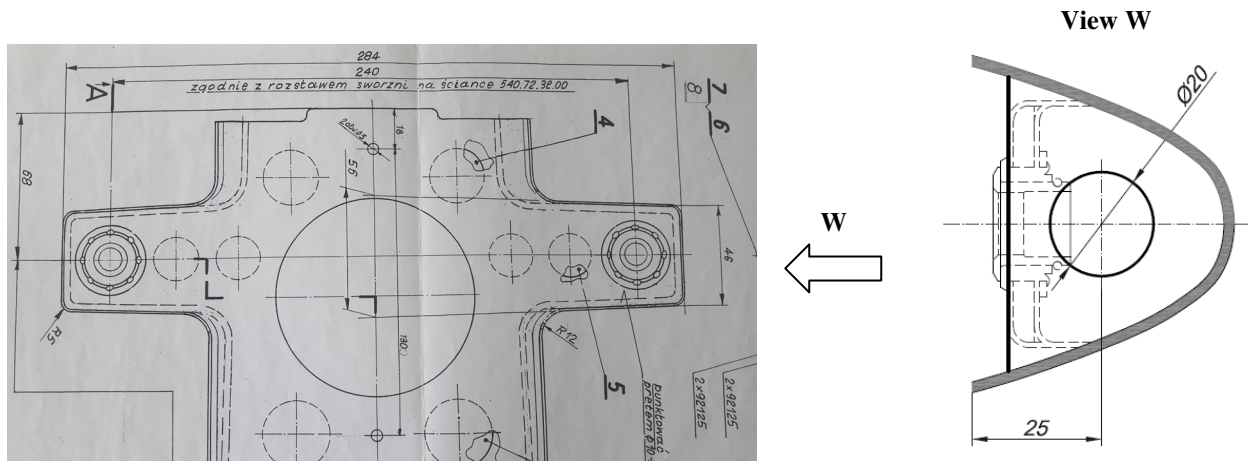
While inserting the bushing in, squeeze the securing ring (item 1, Pic. 4) into the groove, to allow the bushing to move into the nest. When bushing is fully pushed in, the ring expands on the nest other side and secures the bushing against moving out.

Issued			Revised			Rev.
YEAR	DAY	MONTH	YEAR	DAY	MONTH	
18	12	2018	-	-	-	-

4.3 Horizontal stabilizer front fittings

To install the new bushings, do the following:

- mark and carefully cut off the access openings $\phi 20$ mm in the walls, as shown on Pic. 6:



Pic. 6 Positioning of access openings for securing ring

- push in the bushings and secure them with securing rings (item1, Pic. 5);
- cover the access openings with a white tape or laminate acc. to Chapter 17 of TSM.

4.4 Inspection of holes diameters

All the holes in installed bushings check with plain plug gauges $\phi 12H7$, $\phi 16H7$, $\phi 28H7$.
If necessary, re-drill the holes with reamers accordingly $\phi 12H7$, $\phi 16H7$, $\phi 28H7$.

5. RELATED INFORMATION

The bulletin accomplishment should be confirmed in the glider documentation, by issuing of appropriate certificate of release to service (CRS).

Parts necessary for the Bulletin completion are to be ordered from Allstar PZL Glider (techsupport@szd.com.pl).

– END –

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