

AIRWORTHINESS ADVICE NOTICE

TYPE AFFECTED: PW-5 Smyk.

SUBJECT: Miscellaneous airworthiness information.

BACKGROUND: Issue 5 of the AN adds seven new defects (Nos 3 to 9). The defects were discovered on an annual inspection and were forwarded to the GFA by the inspector concerned. In some cases feedback information is requested on these reported defects.

Issue 6 of the AN adds airworthiness advice regarding cracking of the horizontal tailplane attachment lugs (No. 10) and includes Service Bulletin BS-17-19-21/ZSJ - Extension of glider service life to 4000 hours and link.

Issue 7 addresses rudder pedal full forward adjustment and locking (No.11).

DEFECTS: ***1. Quick connectors in aileron and airbrake circuits.***

The quick connectors in the aileron and airbrake circuits are the same as those found in other Polish gliders such as the Jantar, Junior and Puchacz.

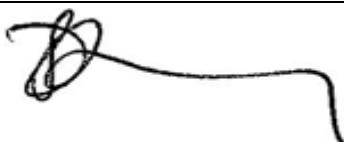
Experience has shown that the locking washer on the connecting pin in the connectors may work loose allowing the control to be connected incorrectly as shown in figure 1.

Should the locking washer be loose then the defect must be rectified before next flight.

The defect may be rectified by either replacing the washer with a new part (the best option) or by cold forming the washer until the hole is between 5.980 and 5.990 mm diameter.

Cold forming should be done by either pressing flat between plates or by placing a steel ball (~ 20 mm ø) on the hole and then tapping with a hammer. If using the steel ball method the washer should be turned over and the process repeated.

SIGNED:



CHIEF TECHNICAL OFFICER - AIRWORTHINESS

For and on behalf of:

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Before pressing the washer on, the pin diameter should be checked for the correct size of 5.992 to 6.000 mm diameter.

Note: When cleaning the self-aligning ball bearing the pin should not be pressed out of the washer. All cleaning and lubrication of the bearing can be done with the pin in place.

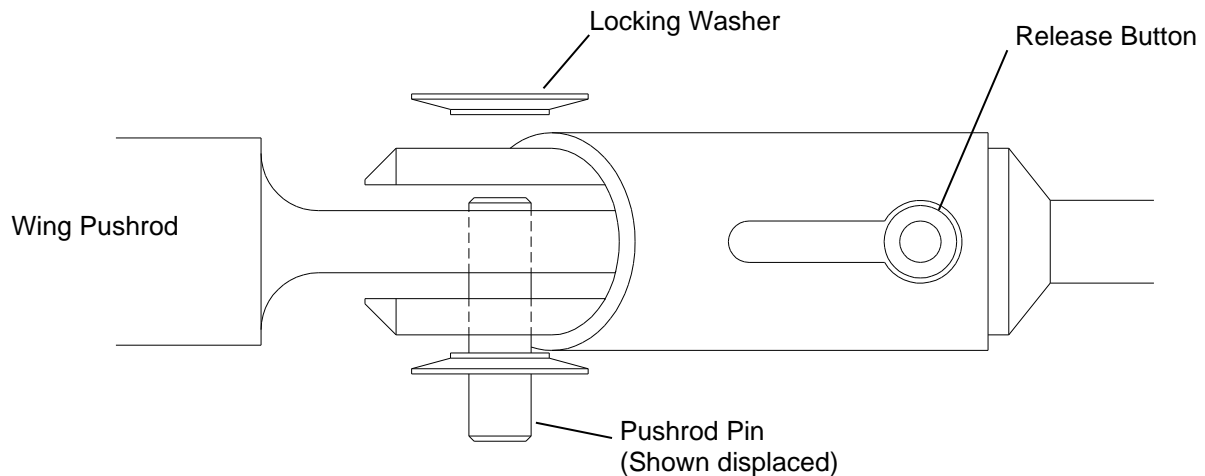


Figure 1 aileron and airbrake connector

2. Possible delamination of outer skin of wing in underside of wing adjacent to root rib.

On one aircraft, an area of delamination approximately 95 mm in diameter has been found adjacent to the root rib glueing flange, a few cms back from the LE and just outboard of the red reference mark. The outer skin was separated from the foam, the inner skin bond appeared to be intact. It is suspected the defect occurred during manufacture and it may prove difficult to find because of heavy paint application in this area. Subject aircraft had been stored in a trailer, with the resultant temperature cycling making the defect easier to find than might otherwise have been the case.

It is recommended that this area be carefully checked for any signs of this kind of defect.

3. Aileron pushrod binding in bearing at full down deflection.

At the control surface end of the aileron drive mechanism, the pushrod binds in the bearing at full down deflection. It was found that there were no spacer washers between the pushrod and the bearing; therefore if the bolts were tightened, the pushrod ends were bent inwards. If the bolts were slackened off to prevent this occurring, there was too much side-to-side slop. The solution is to fit two thin shim washers to take up the

GFA AN 107	ISSUE: 7	12 May 2023	
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slop. See PW-5 Maintenance Manual page 3-17, fig 3-7 for details of mechanism.

4. Airbrake blades rubbing on pushrods.

With the airbrakes open, it was found that the lower edge of the blades was putting pressure on the actuating arms. This had removed some of the corrosion protection and metal-to-metal wear was starting to occur. This needs to be checked and monitored carefully.

5. Grease nipple on undercarriage assembly.

As installed by the manufacturer, the grease nipple on the undercarriage is not accessible without removing the whole assembly. This is rectified by fitting a 90° grease nipple.

6. No drain holes in cockpit.

The lack of drain holes in the cockpit area makes it vital to check for moisture build-up under the seat. Drain holes are strongly recommended if structurally feasible.

7. Excessive force required to deflect rudder.

With the springs fitted to the rudder pedals, the force required to deflect the rudder was measured at 22 kg. The Maintenance Manual calls for a maximum load of 5 kg. The load measured with the springs removed was almost nil. It is not known whether the factory inadvertently fitted springs of the wrong value. Feedback would be appreciated on forces measured by other operators of this type.

8. Pull-down harness.

It was noted that the aircraft being inspected was fitted with a pull-down harness in contravention of Mandatory Airworthiness Requirement No 1, Issue 2, which requires lap-belts to pull up to tighten. The inspector commented that he found it impossible to get the lap belts tight when he tried it. It is not known whether this is a “one-off” defect or if it is more general. Feedback would be appreciated.

9. Airbrake actuating pushrod – binding and wear in cockpit.

Binding and wear has been found where the alloy drive arm connects to the airbrake actuating rod (LH rear of cockpit). The pushrod had worn the corners off the drive arm. Check for this defect and, once more, feedback would be appreciated.

GFA AN 107	ISSUE: 7	12 May 2023	
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10. Cracking of horizontal tailplane rear attachment lugs

Cracks have been found in the lugs of the rear attachment fittings during inspection of two PW-6U gliders as detailed in EASA AD 2010-0108-E / Zakład Szybowcowy “JeŚów” Henryk Mynarski Mandatory Bulletin (MB) BO-78-10-10 (PW-6 sailplane). The PW-5 glider is of similar design and consequently the British Gliding Association (BGA) has issued a mandatory inspection covering both types / BGA Airworthiness Inspection Number 048/01/2010 Aft Tail Plane Attachment Fitting – Cracks PW-5 and PW-6.

Failure of the fitting would lead to loss of control. With the tailplane removed, carry out a close visual inspection of the aft tailplane fitting lugs for cracks or other signs of distress. If the lugs are cracked or otherwise damaged the aircraft may not fly. In the event of the above failure, a defect report must be submitted.

11. Rudder pedal forward lock position

When adjusting the rudder pedals to the forward position (as required for tall pilots), the sliding pedal assembly can be moved past the forward locking hole. When in this unlocked position, the pedals have excessive rotational movement and can interfere with the front static vents. Some clubs have positioned a jubilee (hose) clamp around the forward tube assembly to prevent the overextension and ensure a positive lock.

APPROVED MODIFICATIONS:

1. PZL Swidnik Bulletin No 5/PW-5/97 allows the relocation of the static ports. Copies of this Bulletin may be obtained from the GFA Secretariat however the manufacturer will need to be contacted to obtain the revised Flight Manual pages.
2. PZL Swidnik Bulletin No 7/PW-5/97 allows the installation of a hook on the rear canopy frame to assist in jettisoning the canopy. This is standard fitment on serial numbers from 17.017.013. Copies of the bulletin may be obtained from the GFA Secretariat.
3. PZL Swidnik Advisory Bulletin No BI-17-00-12 allows a modification to be carried out to fit removable ballast in the cockpit. The Bulletin may be obtained from the GFA Secretariat.

GFA AN 107	ISSUE: 7	12 May 2023	
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INSPECTION AFTER EVERY 1000 FLYING HOURS.

The factory has requested all operators to be reminded that, in accordance with the Maintenance Manual (PW-5/IOT/II/94, section 5.4, item 7), after each 1000 hour inspection a report should be produced and sent by the inspector or operator to PZL-Swidnik S.A., Al Lotnikow Polskich 1,21-045 Swidnik, Poland, for the attention of the Glider Programs Manager.

The report should contain reference to the parts and assemblies having been checked during the inspection and the factory also asks for personal opinions concerning the PW-5 operation.

LIFE EXTENSION - 4000 HOURS

Zaklad Szybowcowy 'Jezow' has released Service Bulletin BS-17-19-21/ZSJ dated 22/03/2019 covering instructions for the increase of service life to 4000 hours. This service bulletin can be found at:

[http://www.szdezew.com.pl/Biuletyny/BS-17-19-21_ZSJ_PW-5_\(EN\).pdf](http://www.szdezew.com.pl/Biuletyny/BS-17-19-21_ZSJ_PW-5_(EN).pdf)