



AIRWORTHINESS ADVICE NOTICE

TYPE AFFECTED: SZD-50-3 Puchacz.

SUBJECT: Miscellaneous airworthiness information.

BACKGROUND: This AN records airworthiness information which is not mandatory but which is useful to know. This issue of the AN adds a defect, with a request for feedback.

MAINTENANCE TIPS:

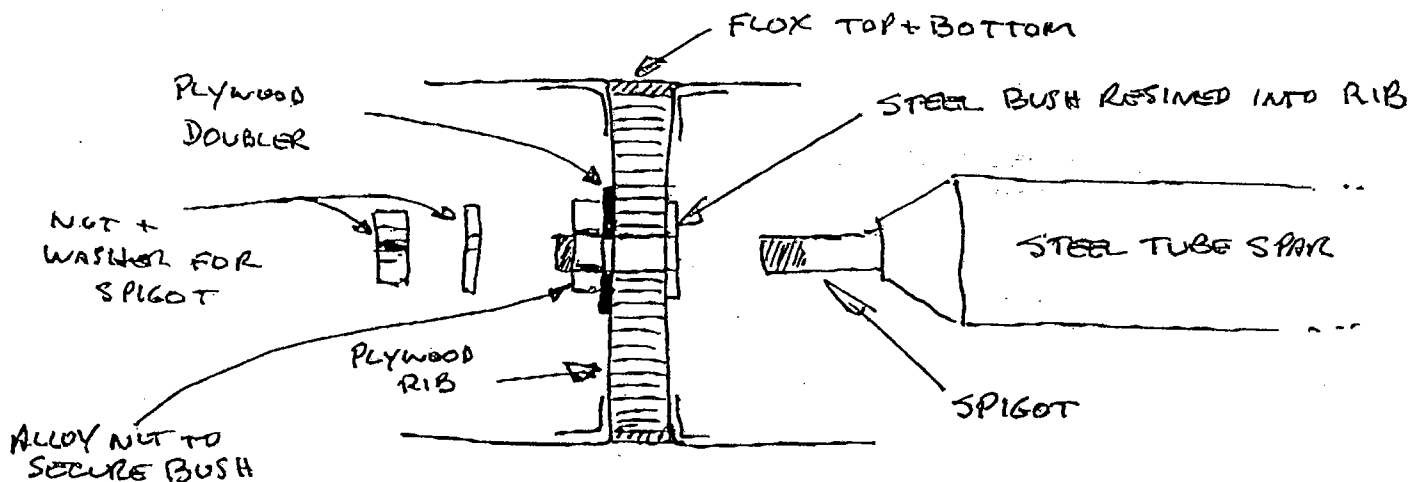
1. The metric measurements given on page 33 of the technical service manual section 3.6.3 are out by a factor of 10. When measuring the play the imperial measurements should be used or the metric limits divided by 10.

The maximum freeplay is therefore 1.5 mm not 15 mm.

DEFECTS:

A defect has been discovered in the tailplane of one example of the Puchacz. Details and a sketch of the defect, provided by Tom Gilbert of T and J Sailplanes, are as follows:

The right tailplane half carries the tubular steel main spar, which is captive in the tailplane. A threaded spigot with nut is attached to a plywood rib 310 mm outboard of the root rib. This plywood rib is 8 mm thick and has a plywood circular doubler around the spigot attachment point. A steel bush is permanently fixed (with resin and a nut) in the rib. This is the attachment point for the spigot of the steel tube spar.



SIGNED:

SENIOR TECHNICAL OFFICER AIRWORTHINESS

For and on behalf of:

**THE GLIDING FEDERATION
OF AUSTRALIA**

During an inspection it was noted that the steel spar in the subject glider could rotate within the tailplane. An inspection hole was cut in the rear shear-web for a boroscope. This showed that the rib was cracked chordwise, but not totally fractured, and the steel bush could rotate in the plywood (resin bond failed). During removal of the rib, broken "flox" was found between the rib and the outer skin.

It appeared that the steel spar had excess load applied span-wise. This may have occurred in a trailering accident some two years previously. The load cracked the rib and caused the resin bond with the bush to fail. This in turn allowed the main spar to rotate. The spar has to be in its correct rotational position for the locking pin to locate.

The rib was replaced, which required large access holes to be cut in top and bottom skins, together with some simple jiggling.

As it is likely that the excessive spanwise load was caused by an identifiable occurrence, i.e. a trailering accident, no AD action is being taken at this time. However a precautionary recommendation is considered to be prudent.

Recommendation. It is recommended that the tailplane be removed from the aircraft as soon as practicable and a check made that the tubular spar is secure in the RH half, i.e. that it cannot rotate. **Caution:** do not use excessive force when checking for rotation, or a problem could be caused which did not exist before. If a genuine problem does exist, it will be detected by applying a relatively light rotational force.

If a problem is found, the aircraft must not be flown and the GFA Secretariat should be notified as soon as possible.