THE GLIDING FEDERATION OF AUSTRALIA

GFA AD 303

ISSUE 1

AIRWORTHINESS DIRECTIVE

TYPES AFFECTED: All Pik 20 series gliders and powered sailplanes with mass balanced flap/aileron systems.

SUBJECT: Cracking and detachment of flap mass balance lead strips.

BACKGROUND: One confirmed and one unconfirmed report of flap, lead mass balance strips cracking at their attaching rivet holes, in one case pieces detaching and causing aileron control system restriction in flight.

NOTE!! NOT ALL OF THE PIK SERIES SAILPLANES HAVE LEAD STRIP MASS BALANCING OF FLAPS OR AILERONS. APPLICABILITY OF THIS AIRWORTHINESS DIRECTIVE MUST BE DETERMINED BY INSPECTION.

REQUIRED ACTION:

1 Within 25 hours

Remove flaps and ailerons to confirm the existence of lead mass balance strips. If fitted, inspect the lead mass balance strips for cracking, principally at the attachment rivets. At least a 10 power magnifying glass will be needed for this.

2. At Form 2 inspections

Inspection (1) to be repeated at each subsequent Form 2 inspection, irrespective of replacement of cracked strips with new strips.

3. Replacement

If cracking is detected the strip/s is/are to be replaced as discussed in the attached appendix titled "Repair Procedure".

IMPLEMENTATION: Inspections and replacement may be executed by any person holding a DoA 1109 Inspectors Certificate endorsed C. of A. Inspection (any type). Inspections and any rectification to be recorded by log book entry.

COMPLIANCE: The requirements of this Airworthiness Directive are mandatory. This Airworthiness 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

For and on behalf of: GLIDING FEDERATION OF AUSTRALIA

24/7/1986

APPENDIX A

REPAIR PROCEDURE

1. REASON FOR LEAD STRIP FAILURE

There are several reasons why the mass balance strips have cracked:-

(a) The gradeof lead used being coarse grained and brittle, due perhaps to the original casting process.

(b) The rivet holes were counter-bored far too deeply, removing too much material.

(c) Both flex of the flap and engine vibration on the powered sailplanes have contributed to the cracking.

2. REPAIR PROCEDURE

Replacement lead strips to be:-

(a) Same weight and length as original

(b) Good quality lead, preferably extruded and shaped to fit, or cast without being granular and brittle.

(c) Strips to be attached at the same rivet holes, using an epoxy resin or similar, to bond the lead in place (rivet up wet).

(d) Counter bores to be kept to minimum depth.

(e) Rivets to have washers on the GRP face, and preferably on the lead face as well. Rivets should not be increased in dia.

(f) The final mass balance of each flap (or aileron) is to be checked in accordance with the maker's manual.