THE GLIDING FEDERATION OF AUSTRALIA

GFA AN 59
(ISSUE 2)

AIRWORTHINESS ADVICE NOTICE

CANCELLED 20.04.2020
REFER CURRENT MOSP 3

SUBJECT: Issue of Maintenance Authorisations for powered sailplanes.

BACKGROUND: From July 1st 1981 the issuing of powered sailplane maintenance authorities became a GFA responsibility. This AN sets the standard procedures to be followed by RTOA's and Daily Inspector Examiners when issuing powered sailplane maintenance authorities.

It is GFA policy to treat Powered sailplane maintenance differently from gliders by issuing authorities on specific types rather than by the type of material of construction. This is because powered sailplane maintenance requires much more specialised knowledge compared with maintaining a similar glider.

DOCUMENTATION: Reference can be made to the GFA MOSP.

PROCEDURE:

1. DAILY INSPECTION

The Daily Inspector endorsement is given via a log book endorsement. This endorsement can be given by any Daily Inspector Examiner who is authorised to perform daily inspections on the type for which the endorsement is to be given.

When testing a Daily Inspector the Examiner should ensure that the Candidate is familiar with the daily inspection procedure set down in the manufactures handbooks.

2. HIGHER AUTHORISATIONS

Where possible powered sailplane endorsements will be issued after successful attendance at GFA engines schools. Where not possible the following are guide-lines for RTOA's to follow when issuing these authorisations.

SIGNED:	For and on behalf of:
SENIOR TECHNICAL OFFICER AIRWORTHINESS	**THE GLIDING FEDERATION OF AUSTRALIA**

2.1 AIRFRAME

Authorisation to perform maintenance on powered sailplanes (Form 2 inspections, 50 and 100 hourly etc) will normally follow attendance at regional schools up to the appropriate level plus experience being gained under mentor training. Once the inspector holds a G1109 the inspector is to be examined by an RTOA on the specific features of the powered sailplane for which endorsement is sought

In particular emphasis must be placed on:

Electrical systems.
Fuel systems.
Effects of vibrations.
Instrument systems.
Sealing against carbon monoxide contamination.

2.2 ENGINE AND SYSTEMS

Once an inspector has considerable experience on a type the inspector may approved to perform repairs and top overhauls upon the engine (not including major overhauls). The RTOA should ensure that the inspector is familiar with the items listed in appendix A.

2.3 MAJOR OVERHAUL

Because performing major overhauls often involves major machining, reboring, the use of extensive facilities and detailed technical knowledge of the engine, authorisations for this work must be negotiated with the CTOA

3. LICENSED AIRCRAFT MAINTENANCE ENGINEERS

There are two possible ways for LAME's to work on glider engines.

1) The LAME joins GFA and becomes a GFA inspector. This allows the inspector to sign out all facets of his work including Form 2, compliance with AD's etc. To become an inspector the LAME must have some familiarity with the GFA airworthiness system and attendance an a basic Airworthiness school would normally provide this familiarity.

If the LAME has no other interest in gliding ie no desire to fly he may apply to the CTOA for special associate membership at a reduced rate.

2) The LAME performs the work and provides a signed log book entry that says the work has been done in accordance with the manufacturers guide-lines etc.

A GFA inspector endorsed on the type will then need to revalidate the maintenance release confirming the work has been done in accordance with the manufacturers manuals and the GFA manual of standard procedures. This needs to be done because the LAME is not a GFA member and is only permitted to sign for the work he has done and not for the airworthiness of the glider.

4. QUALIFIED PERSONS

Persons who have considerable experience with rebuilding engines similar to those found in gliders, for example VW engines, may be permitted to perform maintenance via an engineering order. This order is usually given only for the maintenance of a given engine (serial no) at a given time and is issued by either the CTOA or an RTOA.

After work is performed under an Engineering Order a GFA inspector will need to revalidate the maintenance release in the same manner as for LAME's who are not GFA members.

APPENDIX A

Powered sailplane authorisation knowledge summary

People who wish to be rated for powered sailplane maintenance must have a sound knowledge of the type of engine they wish to be rated for.

The repairer must also have access to the machinery necessary for the job to be done properly. There is no point in a person being authorised to perform a major overhaul on an engine if he does not have access to the resurfacing and line boring machinery that will be required.

In order to be able to repair an engine the inspector should have a knowledge of the following points and know where the specific technical information can be found.

1. Firing Order.

2. Spark plug type and gap setting dimension.

3. Magneto points gap setting dimension.

4. Valve clearances.

5. Oil grade and quantity as well as the typical operating pressures and temperatures.

6. Fuel Grade.

7. Oil system layout, oil change frequency, identification of filter contamination, method (if any) of oil pressure adjustment.

8. Aircraft fuel system layout, importance of fuel tank breather and method of checking, frequency of filter checks and method of fuel tank calibration.

9. Ignition timing and magneto internal timing procedures. Bonding.

10. Valve timing and clearance setting procedures.

11. Carburettor mixture adjustment and an awareness of anti-icing methods.

12. Propeller care and maintenance, tracking, method of fitment to engine and action to be taken after a prop strike.

13. Electrical system layout, fuses, testing, battery charge and condition.

14. Understand the interlocking safety system (electrical and mechanical) used in retractable propeller and engine installations.

15. Accessory removal and replacement, torque values, gaskets.

16. Any other items which are specific to the type in question.

People who are becoming GFA inspectors must have a sound knowledge of the GFA Airworthiness system. This must include knowledge of the GFA AN's and AD's, a knowledge of maintenance releases and familiarity with log books and log book entries.