THE GLIDING FEDERATION OF AUSTRALIA INC

(ABN 82 433 264 489)

C4/1-13 The Gateway, Broadmeadows Victoria 3047
Phone: (03) 9359 1613

Registered Operator's Handbook

Handbook: AIRW-M02

Department: Airworthiness

UNCONTROLLED WHEN PRINTED

Revision 2.2

Gliding Australia Document ID: AIRW-M02

REVISION RECORD

Prepared	Approved	Version	Date
D Villiers	CAD	1.0	19th April 2015
D Stacey	CAD	2.0	10th Sep 2017
D Stacey	CAD	2.1	05th Nov 2018
D Stacey	CAP	2.2	29th April 2025

Registered Operator's Handbook

TABLE of CONTENTS

1 PREFACE

Please read and understand at least the first four pages of this document. The rest is educational. This RO Handbook is meant to be read and understood by everyone involved in glider maintenance whereas MOSP 3 is detailed and is a reference manual of rules and procedures.

The Registered Operator (RO) is critical in the management of glider airworthiness, and this handbook is intended to provide education and guidance to ROs and to act as a handy guide to glider airworthiness requirements and management. As this is a handbook, its treatment of the various subjects is at a high level. Further important information on the various subjects are contained in Gliding Australia's (GAus) Manual of Standard Procedures Part 3 (Airworthiness), known as MOSP Part 3. MOSP Part 3 is a CASA approved document. Throughout this handbook, cross references are provided specifying where in MOSP 3 the additional information and regulatory requirements can be found. All are available on the GAus Website.

Parts of this handbook are educational so you can understand the system and why rules apply. Some parts are listing what you must do. The purpose is to educate you about a complex system and help you understand how to be an aircraft Operator. You have certain obligations like you do owning a car, but they are more complex and often less understood.

The aviation regulations in Australia are in two parts; The Civil Aviation Regulations 1988 (CAR) and Civil Aviation Safety Regulations 1998 (CASR), both apply to Australian gliding except for a few exemptions. CARs are the original regs which are gradually being replaced by the CASRs.

There are some new procedures in the current MOSP 3 to address omissions of the past or changes in regulation. Most are intended to enable what has become standard safe practice in Australian Gliding. eg a system of Permissible Unserviceabilities, allowing very minor modifications such as addition of glider instruments and enabling unswung compasses and unserviceable transponders in appropriate occasions. The introduction of a Logbook Statement for certain aircraft as detailed later in this manual and the addition of refinishing and fabric ratings, and revalidation of all AW ratings every 6 years. Please change to suit as we have changed to improve safety for you and future owners of your aircraft.

David Villiers

Chairman of the Airworthiness Panel

Gliding Australia

2 THE REGISTERED OPERATOR

CASR Part 47 establishes two positions in relation to registered aircraft; the Registration Holder and the Registered Operator:

a. The Registration Holder (RH) is the person in whose name the aircraft is registered. This is usually the aircraft owner. This can often be a company, incorporated body or even a bank if the aircraft is subject to a financial lien.

b. The Registered Operator (RO), however, is the person, club or organisation which has possession of, and operates, the aircraft.

In the gliding community, in the vast majority of cases, the RO will also be the RH, but it doesn't have to be so.

The rules surrounding the RH and RO are Federal Laws, CASRs, not GAus rules. They are administered by CASA, and GAus' delegation requires it to follow the rules, so it cannot vary them.

The CARs and CASRs place a number of responsibilities upon the RO, but these are all covered by MOSP 3.

2.1 RESPONSIBILITIES OF THE RO

The RO is responsible for the continuing airworthiness of the aircraft for which they are the RO. This is a very broad set of responsibilities, with serious consequences if things go wrong. The responsibilities are further specified in MOSP 3 Sections 1.10, 1.11 and 4.14. Within clubs, the appointed Airworthiness Administration Officer (AAO) acts as the RO on behalf of clubs and commercial operators. The RO (even the AAO) is responsible by law.

This handbook covers the duties and responsibilities of the RO with particular reference to gliders. To effectively discharge these responsibilities for the continuing airworthiness of their aircraft, ROs need to have some understanding of the concept of airworthiness and how it is established, maintained and administered.

2.2 AIRWORTHINESS PRIMER

You as the RO need to understand a bit about the Airworthiness system. You really should understand what is summarized in Annex A.

2.3 GLIDER AIRWORTHINESS ADMINISTRATION IN AUSTRALIA

Within Australia, the administration of glider airworthiness is carried out by GAus on behalf of Australian Gliding under a series of delegations and authorisations from CASA. GAus:

a. issues Type Acceptance Certificates (TAC) for new certified glider types;

b. registers gliders and motor gliders, assigns registration letters, and appoints the RO and RH;

c. issues Certificates of Airworthiness (CoA), Experimental Certificates (EC) and Special Flight Permits (SFP) for Australian Gliders;

d. monitors the continuing airworthiness of Australian gliders by reviewing and, if necessary, acting on defect and incident reports;

e. when necessary institutes airworthiness action by working with Type Certificate (TC) holders and National Airworthiness Authorities (NAA), issuing notices, advisory material and Airworthiness Directives (AD);

f. sets standards for maintenance qualifications, trains maintainers against those standards, and issues the appropriate qualifications and authorisations;

g. maintains a series of policy manuals, including this handbook, Basic Sailplane Engineering (BSE) and MOSP 3 containing the rules, regulations and requirements for glider airworthiness; and

h. maintains oversight of all aspects of glider airworthiness through an audit program and routine surveillance by airworthiness staff.

2.4 DUTIES OF THE REGISTERED OPERATOR

The continuing airworthiness of an aircraft depends on a range of issues, all of which are the responsibility of the RO. Hence, the RO is responsible for:

a. Ensuring that details of the RO and the RH held by GAus are correct at all times, because GAus will always contact the RO on airworthiness matters and will always send airworthiness information to the RO.

b. Ensuring that they obtain all airworthiness related information relating to their aircraft from the TC Holder, the National Airworthiness Authority (NAA) of the State-of-Design for the aircraft, engine, propeller and other equipment (noting that they are often different organisations), CASA and GAus;

c. Ensuring that the aircraft is maintained in accordance with MOSP3 and its Logbook Statement (if applicable) and that the Logbook Statement is appropriate to the aircraft's class of operation.

d. Ensuring that all required maintenance including annual inspections and periodic and non-periodic maintenance, as well as life extension inspections or surveys, are completed at the appropriate time in service or due date, and that the aircraft is not flown if required maintenance is outstanding;

e. maintaining the type design of their aircraft by ensuring that all modifications and repairs are approved, and that only approved spare parts are used;

f. Ensuring that all airworthiness activities are conducted by authorised and qualified individuals to approved standards;

g. Ensure that the aircraft's documents, including the Flight Manual and any Maintenance Manuals are available and up to date;

h. Ensuring that all maintenance records and servicing history are maintained and retained for the aircraft; and

i. Completing any other tasks for which the Registered Operator is identified as being responsible elsewhere in this Handbook or MOSP 3.

This does not mean that the RO has to do all these things themselves; only that they must ensure that they are done. If a glider is owned by a syndicate, the jobs can be distributed among members, but only one can be the designated RO, and that person is responsible overall for the discharge of the duties of the RO.

At any stage, if in any doubt, ROs should contact their club AAO, Annual Inspector, Regional Manager Airworthiness (RMA) or GAus.

2.5 SUMMARY

Table 1: Summarises the requirements for Australian gliders, dependant on their class of operation:

Purpose for which the glider is used (Class of Operation)	Registration required?	TC or TAC required?	CoA required?	What maintenance system is acceptable? **	Approved data required for modification or repair?	Who issues the maintenance release ?
Charter (including joyrides offered to the public but not Air Experience Flights)	Yes	Yes	Yes. EC not allowed.	GAus or manufacturers SoM. Compliance to manufacturer's TBO maintenance schedule	Yes	Registered Operator. Certified by GAus Annual Inspector
Hire or rental	Yes	Yes	Yes. EC not allowed.	GAus or manufacturers SoM. Compliance to manufacturer's TBO maintenance schedule	Yes	Registered Operator. Certified by GAus Annual Inspector
Flying Training	Yes	Yes	Yes. EC not allowed.	GAus or manufacturer's SoM/ maintenance program.	Yes	Registered Operator. Certified by GAus Annual Inspector
Private use of a certificated aircraft	Yes	Yes	Yes	Either GAus SoM or manufacturer's SoM/ maintenance program.	Yes	Registered Operator. Certified by GAus Annual Inspector
Private use of an Experimental aircraft	Yes	No	EC required*	Either GAus or manufacturer's SoM/ maintenance program.	No; however mod may require the aircraft "fly off" hours in a designated test area, and additional conditions may apply.	Registered Operator. Certified by GAus Annual Inspector

* Experimental Certificates may only be issued for certain specific purposes, subject to conditions, and may have limited duration; see CASA Advisory Circular 21.10.

** The Airworthiness Limitations section of the manufacturer's maintenance data is always mandatory as approved by the NAA unless superseded by a Supplemental Type Certificate or equivalent. Refer Annex B for options.

Maintenance required by an Airworthiness Directive is mandatory in all cases unless an exclusion has been issued (See CASR Part 39). GAus does NOT have a delegation to issue exclusions to NAA issued ADs however we could revise a GAus AD to suit.

MOSP 3 provides the details that are involved in applying the principles shown in the table.

3 ANNEX A: AIRWORTHINESS PRIMER

Australia is a signatory to the Chicago convention which set up the International Civil Aviation Organisation (ICAO), and so has to comply with that convention and its many Annexes. The principles set out in Annex 8 to the Chicago convention define what may be considered as the "mainstream" process by which airworthiness is achieved.

3.1 BASIC AIRWORTHINESS PRINCIPLES

In summary, the process by which airworthiness is achieved requires:

a. that the design of aircraft be subject to a process of Type Certification that establishes the compliance of aircraft with an acceptable design standard and specifies the "type design" – i.e. the drawings, specifications, and technical documents, however described, which define the aircraft in all its details;

b. that the manufacture of the aircraft be subject to a process that establishes its conformity with the type design, and provides suitable quality control; and

c. that the maintenance of the aircraft be subject to a process that ensures that the safety standards established by the design and manufacture are maintained throughout its operating life.

This process is required for Australian aircraft that are eligible to be used for public transport and charter operations. Some dilution of it is allowed for aerial work and flying training, and for recreational aircraft.

It is important to understand that the airworthiness of an aircraft cannot simply be bolted on at any stage in the life of the aircraft. Airworthiness is the result of a process which begins with the design of the type, progresses through certification, manufacture, operations, maintenance, modification and repair. At every stage of the process assurance must be provided that nothing has been done to compromise the aircraft's airworthiness. For instance, there are large parts of gliders which cannot be properly inspected or maintained in service because they are sealed inside the wings or in inaccessible parts of the fuselage. This is an unfortunate by product of our unceasing quest for performance, in terms of strength, stiffness, weight and drag reduction. Hence, we all need to be assured that no-one has done anything inside the wing (or anywhere else) which might compromise our safety, because it is almost impossible to check without cutting holes in the structure. That is why we have the controls we do on airworthiness matters; so we can have confidence in the safety of our aircraft.

3.2 AIRWORTHINESS RESPONSIBILITY CHAIN

The responsibility for airworthiness is unfortunately not straight forward. Because aircraft can be designed in one country, manufactured in another, registered in a third country, and operated in and over many others, the responsibility is necessarily fragmented, although in a structured and logical sense. Fortunately for GAus members, the situation is simplified by the way gliders are owned, operated and managed. Responsibility for airworthiness is broken down as follows:

a. The NAA of the country which issued the original TC for a type is responsible worldwide for the airworthiness of the type. This organisation is known as the NAA of the State-of-Design. The NAA of the State-of-Design regulates and oversees the TC Holder, unless responsibility for the TC has been formally passed to another country.

b. The organisation which holds the original TC is responsible for the airworthiness of the type for which it holds the TC. The TC Holder is also known as the organisation responsible for the type design, and need not be the manufacturer. It is not uncommon for aircraft manufacture to be contracted (in whole or in part) to another organisation which holds a Production Approval.

c. The NAA of a country in which an aircraft is registered is responsible for the airworthiness of all aircraft of the type which are on its register. States-of-Registry may or may not issue their own type certificates or type acceptance certificates (or similar), but they do not assume responsibility for the type, which always remains with the State-of-Design.

d. Within each country, the internal arrangements for airworthiness control are the responsibility of the NAA, and in Australia much responsibility is placed by CASA (Australia's NAA) on ROs. GAus administers this on CASA's behalf.

e. This goes further to you the RO, the Inspector, the Daily Inspector, and finally the pilot.

Each is a vital link in the chain, and each is responsible by law for their part. Each will answer to the coroner and the family if an accident occurs. That's even if you sold it 20 years before.

3.3 TYPE DESIGN

Airworthiness starts with the design of the aircraft, which has to comply with a design standard which has been agreed between the organisation responsible for the type design and the NAA that will certificate the type. For the majority of modern gliders, the design standard used is the European Certification Standard CS-22 (or predecessors such as JAR-22). There are, however, many other standards which can and have been used, and these are always identified in the Type Certificate Data Sheet (TCDS) for the type.

At the end of the process, after the design has been shown to comply with the agreed standard, the design is effectively "frozen", and a TC and a TCDS are issued for that particular configuration. This configuration is called the Type Design. This configuration must be maintained for the life of the aircraft, or all variations from it appropriately approved. The approval process ensures that all changes to the aircraft comply with the original design standard, or meet a similar or better standard.

Since 1998 Australia has had a system of type certification which automatically accepts TCs issued by a small number of foreign regulators:

a. The European Aviation Safety Agency (EASA),

b. The United States of America,

c. Great Britain

d. Canada, and

e. New Zealand.

This acceptance is signified by the issue of a TAC which is issued for the type, not for each aircraft imported. Types which were already in Australia before October 1998 do not need a TAC, as they were accepted under an older set of rules. As long as one aircraft of such a type has been issued with a Certificate of Airworthiness (CoA), all new examples are entitled to a CoA without the necessity of having a TAC issued. MOSP 3 Chapter 3 addresses type certification. GAus is able to issue TACs for new glider types as long there is a valid TC issued by one of the countries listed above.

3.4 GLIDER REGISTRATION

Before an aircraft can be issued a CoA it must first be registered. This is an administrative process designed to ensure that airworthiness information regarding the aircraft is sent to the right person. GAus has a delegation from CASA to conduct aircraft registration for Australian gliders, and must comply with the law in so doing. There is no room for manoeuvre in the aircraft registration rules.

Registration involves providing GAus with information regarding the RH, the RO, and the aircraft itself. It results in the official appointment of the RH, the RO and issue of the aircraft's registration mark (VH-???). Gliders are placed on the Australian Civil Aircraft Register, not a separate glider register. Aircraft must be registered before a Certificate of Airworthiness or an Experimental Certificate can be issued. MOSP 3 Chapter 4 covers glider registration procedures.

3.5 THE CERTIFICATE OF AIRWORTHINESS

Certificates of Airworthiness are issued by the country in which the aircraft is registered. Once a type has been certificated by the State-of-Design, and an Australian TAC issued, (or is of a type for which a CoA has previously been issued), individual aircraft of the type are entitled to a Certificate of Airworthiness.

Gliders are normally entitled to a CoA in the Normal, Utility or Acrobatic category. Aircraft which do not qualify for a CoA may be granted an Experimental Certificate, but this comes with strict requirements and limitations on the aircraft's use and operation. Aircraft which are temporarily un-airworthy may be issued with a Special Flight Permit which allows very limited operations for specific purposes, such as to fly the aircraft to a maintenance base or to evacuate it from the path of a cyclone.

In Australia, no VH registered aircraft may fly unless it has a CoA, Experimental Certificate or a Special Flight Permit. MOSP 3 Chapter 5 covers the requirements surrounding CoA, Chapter 6 covers Experimental Certificates, and Chapter 7 covers Special Flight Permits. Certain GAus officers have delegations and appointments from CASA to issue these documents, so GAus should always be contacted in the first instance.

3.6 MAINTAINING TYPE DESIGN

For a CoA to remain valid, the aircraft must be maintained to its type design, or any variations to that design must be approved under CASR Subpart 21.M or CASR 21.E (Supplemental Type Certificates). That means:

a. That all significant modifications and repairs to an aircraft must be approved, and it is the responsibility of the RO to ensure that they are.

b. Always using spare parts which comply with the type design and which have documentation to prove it.

c. Always complying with mandatory maintenance requirements, such as those contained in any Airworthiness Limitations Section of the aircraft's maintenance manuals or identified in the TCDS. This particularly applies to items which may have a mandatory retirement or overhaul life.

d. Always complying with applicable Airworthiness Directives, including those from CASA, GAus and the State-of-Design of the aircraft, engine, propeller and other equipment.

Failure to comply with these requirements will invalidate the aircraft's CoA and probably the glider's insurance policy. MOSP 3 Chapter 18 covers modifications and repairs, and GAus also has a manual entitled the "Design Approval Procedures Manual" which is used by those authorised to approve modifications and repairs.

3.7 EXPERIMENTAL AIRCRAFT

Experimental aircraft are managed a little differently.

a. Some types do not have an approved type design, TC or TCDS. Others may have been modified away from the original type design in such a way that they can no longer be shown to comply with the appropriate design standards. Such aircraft are not entitled to a CoA, but instead can be issued with an EC which DOES NOT attest to the airworthiness of the aircraft like a CoA does.

b. Other types have a suspended CoA, are temporarily on an EC and must or intend to come back to a CoA. These can also be modified as any on an EC but cannot be flown once the EC expires until approved data is certified for all significant modifications and the CoA suspension is lifted. This may require Engineering Orders or STCs for each mod or it can be re-instatement to TC. It can be onerous or impossible.

ECs come with strict requirements and limitations on the aircraft's use and operation. These limitations are based on the perceived risk that the aircraft represents to people and property other than the pilot. Experimental aircraft are required to bear placards and signage to alert pilots and passengers to the experimental nature of the aircraft. Experimental aircraft may not be used for commercial operations, which means that they cannot be used for club training, and may not be "placed on the line". They may only be used for strictly private operations, and the CASRs place strict limitations on the purposes for which an Experimental Certificate may be issued. Therefore GAus cannot authorize all owner intensions. MOSP 3 Chapter 6 covers the requirements for Experimental Certificates. See also CASR 21.191 (purposes for which an Experimental Certificate can be issued) and CASR 91 Division 91.T.4 (Experimental aircraft-operating requirements).

Because they have no approved type design, Experimental aircraft may be modified or repaired without approval under CASR Subpart 21.M or 21.E, but major changes may invalidate the Experimental Certificate, which will have been issued on the basis of the risk identified at the time of issue. Changes to the aircraft may alter that risk, so any changes must be referred to the person who issued the Experimental Certificate so that if necessary conditions can be altered or imposed.

Any applicable ADs including those from CASA, GAus and the State-of-Design of the aircraft, engine, propeller and other equipment must be complied with.

Experimental aircraft are subject to the same laws of physics as certificated aircraft, and ROs are strongly advised to apply to their aircraft the same degree of rigour as would be applied to a certificated type.

3.8 MAINTENANCE REQUIREMENTS

To keep aircraft safe, every type needs a maintenance program. For modern gliders, some TC Holders provide a good System of Maintenance (SoM)/ maintenance program, but other types, particularly older types, do not have much at all in the way of a manufacturer's maintenance program. In all cases, however, the TC Holder must ensure the ongoing airworthiness of their type, and does this by:

a. Maintaining some form of SoM/ maintenance program,

b. Collecting information on defects found in the world wide fleet,

c. Issuing amendments and updates to the Flight and/or Maintenance Manual,

d. Issuing Service Bulletins (SB), Technical Notes (TN) or similar documents, and

e. Working with their regulator to ensure that those requirements which should be mandatory are issued as ADs.

Unfortunately, there are some glider types flying in Australia which no longer have an active TC Holder. In these cases, GAus provides the support and services normally expected of a TC Holder, often without any of the technical data available to a TC Holder. These types must be maintained under the GAus SoM.

In addition to the TC Holder's maintenance recommendations (if any), GAus have established their own maintenance program contained in MOSP3, the inspection schedule known as the GAus Form 2. The GAus Form 2 is only a checklist; MOSP 3 embodies the GAus SoM. The BSE and training specifies how this is to be performed as a generic maintenance schedule which specifies the minimum maintenance that has to be done on Australian gliders on an annual basis, and applies to all Australian Gliders. In addition, all Australian gliders are subject to regular Life Extension Inspections or Surveys (See MOSP 3 Chapter 14).

The level of maintenance to be applied to a glider is based not only on the TC Holder's recommendations and GAus' SoM; it also needs to consider the classes of operation for which the glider is used. Aircraft which are used for commercial or charter operations must be maintained to a high standard, but for those aircraft used for private operations the standards can be relaxed a little. Table 1 below shows the required maintenance standard for each class of operation. MOSP 3 Chapter 9 addresses glider maintenance policy.

The RH must choose a SoM for the sailplane. Note the GAus SoM is the default SoM and does not require a glider Logbook Statement. If electing a SoM other than the GAus, it is the responsibility of the RH to raise a Logbook Statement and forwarded to the GAus. The GAus records the election in the data base and retains a copy in the aircrafts file. The Logbook Statement must be affixed to the front of the aircraft's logbook for reference.

If the Logbook Statement states the manufacturers SoM, all manufacturers maintenance requirements as listed in the AFM, AMM, Mandatory SB or TN must be carried out. Additionally, all manufacturer's time lifed components must be strictly followed. Note an engine life extension past manufacturers TBO is not available; engine life extension 'On Condition' is an option in the GAus system only. Further guidance on the Logbook Statement is found in Annex B to this handbook.

Note that the GAus SoM is contained in MOSP 3. The manufacturer's maintenance schedule (specifying what has to be done when) can be regarded as a recommendation only, unless the aircraft's class of operation requires it to be complied with, see Section 2.5.

However, there are parts of the AMM with which maintenance compliance is mandatory, regardless of the class of operation. Any maintenance listed in an Airworthiness Limitations Section (ALS), or listed as a Certification Maintenance Requirements (CMR) on a TCDS is mandatory.

3.9 MAINTAINERS – WHO CAN DO THE WORK?

Work on Australian gliders may only be certified by those authorised to do it although anyone may do the work under their supervision. There are a range of authorisations specified in Chapter 10 of MOSP 3, and each authorisation has a different scope of work. Holders of the various authorisations may only sign for work within their authorisation's scope:

a. Annual Inspectors may perform routine glider maintenance as well as annual inspections. Unless separately authorised to do so, they may not perform minor or major repairs, survey and life extension inspections or approve modifications or repairs.

b. Component Replacement Inspectors may also do routine maintenance on gliders, but their authorisations are more limited than annual inspectors, and they cannot certify annual inspections.

c. Survey Inspectors are able to do surveys and life extension inspections. Such inspectors are normally also annual inspectors.

d. Minor Repairs may only be carried out by inspectors duly authorised to do so. Most hangar and trailer rash falls under the heading of Minor Repairs, but inspectors will assess any damage and advise accordingly.

e. Major Repairs are usually only conducted by commercial organisations because of the tooling, materials and skills necessary. They must hold and list approved data for each repair in the documentation which is referenced in the Logbook certification.

f. All CASR 21.M Authorised Persons (including, but not exclusive to GAus) are able to approve modifications and repairs to Australian gliders (ie provide approved designs). Authorised persons are required to comply with their Instrument of Appointment which is based on their Design Approval and Procedures Manual (DAPM). GAus should be contacted if in any doubt.

MOSP 3 Chapter 10 provides further details on the authorisations available for glider maintenance, and the privileges of each authorisation.

3.10 DEFECT REPORTING

So that TC Holders can maintain the airworthiness of their fleet, it is essential that they are told about airworthiness problems as soon as they arise, no matter where in the world they occur. To this end, GAus has established a system of defect reporting which ensures that both GAus, the TC Holder, and, if necessary, CASA, are told of defects as soon as they arise.

This system relies on all concerned to raise defect reports and forward them to GAus as soon as possible after a defect is discovered. Anyone can raise a defect report, but it is incumbent upon ROs to ensure that any defects found on their aircraft are reported to GAus via the GAus Safety management, Operational incident and Airworthiness Reporting system (SOAR). MOSP 3 Chapter 12 covers the GAus defect reporting system.

Once submitted, defect reports are assessed by GAus, and if appropriate are forwarded to the appropriate TC Holder and possibly CASA and the TC Holder's regulator for action. If GAus, the TC Holder or one of the regulators believes that action is required, action will be initiated in the form of either an SB, TN or similar from the TC Holder. If a regulator believes the issue to be serious and deserving of mandatory action, an AD will be raised to require action on the part of the RO.

3.11 AIRWORTHINESS DIRECTIVES

When GAus or a regulator believes that a safety risk exists, and that it could affect more than one aircraft, they will initiate action to require the problem/defect to be rectified. ADs issued by CASA or the State-of-Design (or TC Holder's regulator) of the airframe, engine, propeller or other equipment have the weight of law and compliance is mandatory. GAus ADs are issued under MOSP 3 and therefore also must be complied with.

It is illegal to fly an aircraft to which an AD applies unless that AD has been complied with or an exclusion has been granted by CASA (GAus does NOT have a delegation to grant exclusions to ADs). MOSP 3 Chapter 15 provides details on ADs.

3.12 AIRCRAFT DOCUMENTATION

Every aircraft has a set of documentation which performs several functions:

a. The Aircraft Flight Manual (AFM) provides operational instructions and limitations for the aircraft,

b. The Aircraft Maintenance Manual (AMM) contains information on what should be done, when and how the aircraft should be maintained. It may be a separate manual, or a series of manuals, but it may also be part of the AFM.

c. The SBs or TNs issued by the TC Holder are an adjunct to the AMM. These contain useful information on airworthiness topics, and may be mandated by AD. These are usually issued separately, and ROs must ensure that they receive them, either by subscription to the TC Holder, or by regular visits to the TC Holder's web site.

d. The Aircraft Logbook is a legal document which contains the aircraft's history, including records of its configuration, modifications, repairs, ADs complied with and routine maintenance carried out. It is unique to an individual aircraft and is critical to the aircraft's airworthiness. Without it, the aircraft cannot be shown to be airworthy. Hence it is a very good idea to maintain a backup copy of the Logbook. This may be in any form, photocopy, scan, digital photographs or any other form in case the Logbook is lost.

e. The aircraft Maintenance Release (MR) is the document which attests to the aircraft's day-to-day airworthiness, and contains details of maintenance required between annuals, flights and flight times, records of Daily Inspections and minor and major defects recording. The aircrafts MR is part of the aircrafts logbook and must be retained with the aircrafts logbook after expiry.

The maintenance of the documents is the responsibility of the RO, who needs to:

a. Ensure that their copy of the aircraft's AFM and AMM are up to date;

b. Ensure that they receive SB/TN from the TC Holder;

c. Ensure they obtain and maintain a complete list of all ADs from the NAA of the state-of-design, CASA and GAus in the Logbook.

d. Ensure that the Logbook is kept safe and secure, and that appropriate entries are made by the appropriate person when necessary;

e. Ensure that the MR is properly completed before and after every flight.

As any inspector asked to work on an aircraft will need access to all these documents, ROs are advised to build a documentation pack which contains all of these documents, and to maintain it to the most current versions. It should contain, as a minimum, copies of:

a. Certificate of Airworthiness,,

b. Certificate of Registration,

c. Certificate of Appointment of RO,

d. Aircraft Flight Manual (or equivalent),

e. Aircraft Maintenance Manual,

f. Manuals for all instruments and equipment fitted to the aircraft,

g. SBs and TNs for the airframe, engine, propeller and any other equipment,

h. ADs from all sources for the airframe, engine, propeller and any other equipment,

i. GAus Airworthiness Alerts (AWA), Airworthiness Advice Notes (AN) and any other relevant guidance material, and

j. Expired MRs

k. Any other useful or relevant material.

As long as they and the inspectors can obtain documents online they do not need to maintain paper copies as official online copies will be up-to-date. They must ensure their aircraft is current with the latest versions of each AD and manual.

3.13 NOISE CERTIFICATES

All civil aircraft operating in Australia are required to comply with the Air Navigation (Aircraft Noise) Regulations regardless of size, purpose, or ownership. Aircraft operators need to complete and submit the Aircraft Noise Assessment form. At the moment sailplanes are not exempt but GAus have received agreement that sailplanes that do not self-launch do not have to comply. If the sailplane is a powered self-launch type, the RO must confirm that the aircraft is compliant with certification requirements (reference AFM or TCDSN) or a Noise Certificate has been issued by Airservices Australia. See – MOSP 3 Section 2.10.

Noise Certificates are not transferrable on sale of the sailplane. The new owner must apply to Airservices for a Noise Certificate.

Please note that if unsure if your aircraft meets requirements, you can go online to the Airservices website and confirm by supplying Air Services with a foreign Noise Certificate, many are easily downloaded from EASA, EASA Noise Certificates, the process is quick and free. GAus will assist members to resolve this if required.

4 ANNEX B: SAILPLANE MAINTENANCE SYSTEMS

Preface: This is a new system introduced to GAus in 2017 permitting the RH to elect the SoM for the sailplane. The logbook statement election will determine what maintenance program the glider is to be maintained, whether mandatory service bulletins/ technical notes and all maintenance requirements listed on the Type Certificate, in the AFM and AMM must be followed including time lifed components and W&B requirements.

4.1 GENERAL:

The GAus maintenance system is the minimum maintenance standard for all sailplanes and is the only option for those types not supported by a TC Holder. For the others, the RH has the choice of electing either the GAus SoM or the TC holders. Sailplanes operating on an Experimental Certificate (excluding R&D and Showing Compliance with the Regulations) will generally use the GAus system. Those electing a SoM other than the GAus SoM will require a logbook statement (see examples below).

4.1.1 Wooden gliders or gliders having steel tube fuselages and wooden flying surfaces.

These gliders usually do not have any specific life limitations; they are basically maintained “on condition”. The default GAus maintenance system is generally sufficient. These aircraft often do not have an adequate manufacturer’s maintenance system. The TCDS and the manufacturer’s manuals will normally provide rigging and control travel limits. However if the aircraft uses aluminium components in the wing attachment or wing joint areas, there may be additional inspection or fatigue life limitations. Fatigue is also important in regard to control systems and their associated structure and attachments, e.g. pulley brackets, hinges and pivot points, mass-balance weight attachments, etc.

4.1.2 Metal gliders (i.e. stressed-skin sheet metal structures).

These gliders usually have, or can be expected to have, a finite “safe” fatigue life, based on the known behaviour of the materials from which they are made, together with a statistical loading spectrum due to gusts, manoeuvres, and so on. This is normally reflected by an “Airworthiness Limitations” section in the manufacturer’s maintenance data, but older types may lack this information, and this lack usually results in a life limitation AD being issued in the light of service experience.

The default GAus SoM supplemented by GAus ADs and ANs may be used as the basis for the maintenance system; OR the manufacturer’s maintenance and overhaul manuals (as applicable) may be used; however any “Airworthiness Limitations” or equivalent mandatory ongoing airworthiness maintenance requirements given in either the manufacturer’s maintenance instructions or the aircraft Flight Manual are mandatory unless superseded by an STC or equivalent; and therefore they must be included by reference in the Logbook Statement.

The same issues in regard to control systems apply as for wood/steel tube aircraft.

4.1.3 Composite (GRP and similar) gliders

These gliders are made from materials whose fatigue and ageing properties are still being learned; and the properties are affected by the design and layup techniques as well as the curing process; so unlike metals, there is little information that would allow the reliable prediction of the safe life. The life is largely a matter for experimental determination for every manufacturer’s design techniques and manufacture processes. For this reason, these aircraft usually have an ongoing structural inspection regime in order to be used beyond a relatively short threshold life. This means there is no alternative to the manufacturer’s ongoing airworthiness program, for the aircraft’s maintenance system.

4.2 HOW DO I OBTAIN THE MAINTENANCE SYSTEM FOR MY AIRCRAFT?

If the logbook is silent regarding the Logbook Statement (no logbook statement installed), the sailplane including engine and propeller is to be maintained to the GAus SoM. The only sailplanes that require a Logbook Statement are:

1. sailplanes used for commercial purposes eg Charter
2. the RH elects the manufacturer's SoM
3. a compliant Light Sports Aircraft (LSA)
4. sailplanes powered by an electrical power plant, or
5. sailplanes that have unusual maintenance requirements covered by a STC or CASA AD exclusion.

NOTE: If the glider is an Australian First-of-Type (FOT), either the importer or the owner (RH) may need to discuss the most suitable SoM with the airworthiness department. In the case of electing a SoM other than the GAus', a Logbook Statement will be required with the CoA application.

4.3 LOGBOOK STATEMENT EXAMPLE:

GLIDING AUSTRALIA
AIRCRAFT LOGBOOK STATEMENT
Aircraft identification

Type	Registration	Serial No
*Blanik L13 with STC SVA 542 life extension**	VH-ABC	171717

**Also applies to L13 with life extension to the previous version. STC 96-1*

REGISTERED OPERATOR: Bill Biggins 128 Sandcastle Lane, Sandcastle, NSW 2222

CoA Type: Standard CoA, Utility category

TCDS: EASA A.024 issue 9 dated 10 January 2017

AD EXCLUSIONS:

Exclusion Instrument No.	*From*	*Subject*	*AMOC*
10/14335	*EASA AD 2010-0185E*	*Emergency grounding - fatigue life limit*	*STC SVA-542*
13/10577	*EASA AD 2013-0252*	*Conductivity of spar cap angle extrusion*	*STC SVA-542*
11/6408	*EASA AD – 2010-0135 (correction 18/11/2011)*		*STC SVA-542*
16/611-3	*EASA AD –2011-0135R1*		*STC SVA-542*
16/4117	*EASA AD-2011-0135R2*		*STC SVA-542*
17/4073	*EASA AD-2011-0135R3*		*STC SVA-542*
13/10577	*EASA AD – 2013-0252*	*ATA 57 – Prohibition of all Flights / Restoration of Airworthiness*	*STC SVA-542*

Note: AD exclusions are valid only for the nominated Registered Operator.

GAus ADs that are superseded by the life extension:

AD Number	***Service Bulletin No.***	***Description***	***Serial numbers affected***
	L13/023	*Modification to spar web between root rib and rib # 3*	*1st to 21st series*
LET N.P. Kunovice 14 (GAus AD/106 issue 2 10/9/81)		*Inspection of wing root forging*	*All*
GAus AD/426		*Cracking of wing ribs*	*All*

AD Number	*Service Bulletin No.*	*Description*	*Serial numbers affected*
GAus AD/524 issue 1	*L13/085a*	*Vertical tail attachment fitting*	*All*

MAINTENANCE SYSTEM:

AIRFRAME: GAus System of Maintenance (SoM) Annual Form 2 inspection as expanded GAus MOSP including Basic sailplane Engineering (BSE), GAus Inspection Plans and Life Extension Survey Schedule (MOSP Chapter 14) for the L-13A1.

Perform all EASA, CASA and GAus applicable Airworthiness Directives (ADs) (including all equipment ADs). ADs in particular being GAus AD 53 and GAus AD 77 current issue.

Reference applicable parts of GAus AN #49.

Reference all manufacturers manuals and technical notes (TNs) and service bulletins (SBs) for how to perform maintenance. Aircraft Manufacturers TNs and SBs will be reviewed and implemented on a safety and risk based basis.

REFERENCE MATERIAL: Sailplane type manuals as follows:

(I)	*Do-L13-1111.3*	*Flight Manual - Pilots notes for the L13 sailplane*
(ii)	*Do-L13-1132.3*	*Technical Manual of the L 13 Sailplane;*
(iii)	*Do-L13-1131.3*	*Manual for Operation and Maintenance of the L 13 sailplane without overhauls;*
(iv)	*Do-L13-3031.3*	*Overhaul Manual for L13, L13A gliders;*
(v)	*Do-L13-2121.6*	*Spare parts catalogue L-13 Blanik*
(vi)	*FAA AC 43.13-1 & 2*	

MANDATORY MANUAL SECTIONS: Nil

MINIMUM EQUIPMENT LIST: 2x ASI; 2xAltimeters; 1 compass (front panel); 2x four part safety harness; 2x sets cushions (10 cm thick when compressed)/parachutes

SOURCE OF AIRWORTHINESS DIRECTIVES:

https://www.casa.gov.au/;
http://doc.glidingaustralia.org/; and
http://ad.easa.europa.eu/.

OTHER INFORMATION AND REQUIREMENTS:

Note:

1. *The entire airframe will be due for retirement from service at 12,000 hours total time in service or 50,000 flights if launched primarily by aerotow, or 11,250 hours total time in service or 45,000 flights if launched primarily by winch or equivalent methods.*

2. *No aerobatics are permitted other than spin training.*

SIGNED: **(RH)** **DATED:**

GLOSSARY OF TERMS USED IN THIS MANUAL

4.4 DEFINITIONS

AAO	Airworthiness Administration Officer
AD	Airworthiness Directive
AFM	Aircraft Flight Manual
AMM	Aircraft Maintenance Manual
ALS	Airworthiness Limitations Section
AN	Airworthiness Advice Notes
CAD	Chairman of the Airworthiness Department
CAP	Chairman of the Airworthiness Panel
CAR	Civil Aviation Regulations
CASA	Civil Aviation Safety Authority
CASR	Civil Aviation Safety Regulations
CMR	Certification Maintenance Requirements
CoA	Certificate of Airworthiness
CTP	Chairman of the Training Panel (Club/Operator).
DAPM	Design Approval and Procedures Manual
EASA	European Aviation Safety Agency
EC	Experimental Certificates
EMA	Executive Manager Airworthiness
GAus	Gliding Australia.
ICAO	International Civil Aviation Organisation
LSA	Light Sports Aircraft
MOSP	Manual of Standard Procedures
MR	Maintenance Release
NAA	National Airworthiness Authority
RH	Registration Holder
RO	Registered Operator

SB	Service Bulletins
SOAR	Safety management, Operational incident and Airworthiness Reporting system
SoM	System of Maintenance
TAC	Type Acceptance Certificates
TC	Type Certificate
TCDS	Type Certificate Data Sheet
TDCSN	Type Certificate Data Sheet Noise
TN	Technical Notes