

## **SECTION 11.1 MAINTENANCE POLICY OTHER THAN GROUP G AEROPLANES**

### **11.1.1 INTRODUCTION**

RAAus is responsible for specifying the maintenance requirements for aircraft registered with RAAus. This section details the extent of maintenance that can be conducted by owners, pilots, and other persons on recreational aircraft operated in accordance with CAO's 95.10, 95.32 and 95.55.

Maintenance includes all those actions which are carried out on a recreational aircraft to ensure the aircraft is fit for flight and includes inspection, adjustment, repair, the incorporation of modifications, and the recording and retention of comprehensive maintenance documents detailing all maintenance completed. Maintenance excludes the design or redesign of modifications. The pilot-in-command of a recreational aircraft must ensure that the aircraft is fit for flight, currently registered, and correctly maintained before each flight.

This section defines maintenance responsibilities for owner/operated recreational aircraft and aircraft used for hire and/or flight training. The method by which suitable persons are authorised by RAAus to conduct maintenance is also contained in this RAAus Technical Manual.

Unless specifically stated in this manual, all maintenance must be carried out in accordance with the engine and airframe manufacturer's maintenance documentation such as manuals, periodic maintenance checklist, published Service Bulletins, Airworthiness Directives, and Safety Directives for factory-built aircraft.

**NOTE: A lightweight aeroplane must be maintained in accordance with Part 4A of CAR. Only appropriately qualified Part 66 license holders may carry out maintenance on a Lightweight aeroplane unless an individual has been authorised under CASA instrument 18/22 (or updated instrument). Refer to Section 12.8 and subsection 15.1.8.**

For an aircraft that does not have a manufacturer published periodic maintenance checklist e.g. ABE aircraft, the builder may use the CASA published periodic maintenance checklist for guidance in the development of an aircraft specific maintenance check list. Refer also to subsection 11.1, 2.2.

### **11.1.2 FATIGUE MANAGEMENT BY MAINTAINERS**

RAAus maintainers must not perform maintenance activities whilst their performance is adversely affected by fatigue, stress, or ill health. The effects of fatigue, stress, high workload, family commitments and maintaining a suitable health standard form part of an effective fatigue management process. Regulatory requirements focus on these factors in the commercial aviation sector however, fatigue is the general term RAAus uses to describe physical and/or mental weariness (impairment) that affects judgement, and which extends beyond normal tiredness.

RAAus has published and clearly defined a member's personal accountabilities and responsibilities when conducting maintenance tasks which also includes the assembling of a trailerable aircraft prior to flight, and the conduct of an aircraft daily or pre-flight inspection.

RAAus participants are required to be conversant with and use the I.M.S.A.F.E. aeromedical self-assessment tool whilst engaged in maintenance activities. This self-assessment tool is as equally pertinent for use by maintainers as it is for pilots.

### **11.1.3 ELEMENTS OF MAINTENANCE**

Elements of maintenance are:

- a) what to do; and
- b) when to do it; and
- c) how to do it; and

- d) who can do it; and
- e) documenting the maintenance completed at (a) to (d); and
- f) returning the aircraft to service.

What maintenance to conduct and when to do it is contained in the manufacturer's product support manuals. Where this is not the case, the inspection schedules in CASA Schedule 5 should be used as a guide for privately operated aircraft. Reference may also be made to CAAP 42B-1.

Maintenance of aircraft used for hire and/or flying training must be conducted in accordance with the manufacturer's requirements. Where there are no manufacturers requirements, then the aircraft must be maintained in accordance with a System of Maintenance or Maintenance Schedule approved by an NAA for the aircraft. E.g. CASA Schedule 5 or a CASA approved schedule of maintenance. All such maintenance must be performed by suitably trained, experienced and accredited persons holding an RAAus Level 2 or higher Maintenance Authority.

### **The Use of an Hours and Maintenance Release (MR) RESERVED**

On completion of annual periodic maintenance and completion of aircraft logbook entries, the maintainer must issue a release of service document for the aircraft in relation to the maintenance, that is in a form approved by RAAus and complies with CASA regulations.

RAAus recommends the use of a Maintenance Release (how-so-ever-named) be used to facilitate compliance with this requirement. A MR if used should be placed in the aircraft when the aircraft is returned to service. A MR must record:

#### **a) Aircraft Details**

- i. Aircraft make and model.
- ii. Aircraft registration number.
- iii. Aircraft registration expiry date.
- iv. MR expiry date or expiry at hours in service.

#### **b) Authorised Person Issuing the MR**

- i. Name, signature, and member number of person issuing the MR.

#### **c) Maintenance**

- i. Time, date, and place that the MR was issued.
- ii. Type of operation (Private or Flying Training).
- iii. Scheduled maintenance required while the MR is valid.
- iv. Date or time in service (TTIS) when maintenance is required.
- v. Certification that maintenance required has been completed.
- vi. The date that maintenance required has been completed.

#### **d) Daily Inspection Certification**

- i. Date, Signature, maintenance authorisation held and member number.

#### **e) Aircraft time-in-service**

- i. Flight Time.
- ii. Progressive Total for flight time.

#### **f) Landings Totals**

- i. Columns for number of landings, oil added for each flight.

Guidance for maintainers and pilots on the issuing and use of a RAAus maintenance release (MR) is published in an RAAus Recreational Aviation Advisory Publication (RAAP) and published on the RAAus website.

#### **11.1.4 MAINTENANCE POLICY**

##### **Owner Operated Aircraft**

Maintenance of owner operated aircraft, not being used for flight training, or private hire is the responsibility of the registered owner/operator. An appropriate maintenance schedule must exist for the aircraft. The selection of appropriate maintenance schedules and the qualifications and experience of persons to complete the maintenance is the responsibility of the registered owner. The maintenance schedule should be that provided by the aircraft/ kit/engine/component manufacturers. When an aircraft does not already have an available periodic maintenance schedule, the maintenance schedule in CASA Schedule 5 shall be used. Reference may also be made to CAAP 42B-1.

Having completed any maintenance on an aircraft, the authorised person who conducted the maintenance is to immediately detail the actions carried out in the aircraft maintenance logbook in accordance with Section 12.5 of this manual.

After an owner-operated aircraft that is not being used for flight training or private hire has been rebuilt after major damage or wear, engine strip and rebuild or any maintenance activity which could affect flight safety, that aircraft must be flown on a solo check flight. Successful completion of this check flight is to be recorded in the aircraft logbook and signed for by the pilot who conducted the check flight before any other operation of the aircraft, or a passenger is carried in the aircraft.

##### **Competence to carry out work.**

An individual that has completed the mandatory RAAus L1 or higher training process and has the appropriate qualifications and experience to carry out maintenance on an aircraft, other than a Group G aeroplane, or aeronautical product may carry out the maintenance in accordance with the manufacturer's schedule and checklists to ensure the continuing airworthiness of the aircraft.

Maintenance authority holders are responsible for ensuring they are familiar with and can satisfactorily comply with any manufacturer's instructions regarding the maintenance before undertaking any of the tasks identified.

It is recommended that owner-pilots undertake training and work under supervision of an L2 or higher qualified maintainer until they have the underpinning knowledge required to maintain their aircraft in an airworthy condition. Where doubt exists, the owner must consult an RAAus Level 2 or a LAME for advice. Engine or airframe maintenance training courses may also be undertaken and accepted by the RAAus HAM e.g. Rotax 912 Familiarisation, Service, Line Maintenance and Heavy Maintenance Course.

The HAM may request copies of aircraft and maintainer logbooks for the purposes of assessing the standard of compliance with all required RAAus and manufacturer stipulated requirements. Should there be reasonable cause to determine there is a potential threat to safety, the HAM may immediately suspend a maintenance authority and/or aircraft registration. Immediately following a suspension and in accordance with the RAAus Occurrence and Complaints Handling Manual a Complaints Officer will implement the RAAus Occurrence and Complaints Handling Manual processes to investigate further.

##### **Aircraft used for Flying Training or Hire**

Factory produced aircraft may be offered for flying training or for hire. Under such an arrangement (usually referred to as Cross Hiring) the FTS or CFI will become the registered operator of the aircraft. Such factory-built aircraft are to be wholly maintained by a Level 2 or higher Maintenance Authority holder. The daily inspections may be completed by a RAAus RPC holder endorsed for the Group of aircraft that is to be operated.

At the completion of any maintenance on a recreational aircraft, details of the work carried out must be immediately entered into the aircraft logbook, the entry signed by the maintainer who must include their name in block letters, RAAus number and the date of the entry.

If any maintenance is carried out on the aircraft including the primary flight control systems involving disconnection, adjustment or modification, an independent inspection of the primary flight control systems or items is mandatory before the aircraft is returned to service. Successful completion of this independent inspection is to be recorded in the aircraft maintenance logbook and signed for by the RPC holders or maintainers who conducted the inspection. An independent inspection may be carried out by an RAAus L1, L2, L3, L4, or RAAus Pilot Certificate holder familiar with the aircraft make and model. Any person unable to comply with this independent inspection due to the non-availability of an independent person to inspect the aircraft, must contact the HAM for advice.

If an aircraft that is eligible to be used for flight training or private hire has been previously maintained at any time by an L1, that aircraft may not be used for flying training or hire until a Level 2 Maintenance Authority holder has inspected the aircraft and is satisfied that the aircraft complies with the original certification, is correctly maintained, is in an airworthy condition, including modifications, and overhauled components, check that the aircraft meets continuing airworthiness requirements (i.e. all ANs, SBs etc have been completed, time life components are in date etc) and TECH Form 013 has been completed and they record that inspection in the aircraft logbook. Tech Form 013 is to be retained with the aircraft maintenance records.

A Maintenance Controller may be nominated and advised to RAAus via Tech Form 003 - Nomination of Maintenance Controller. To be accepted by RAAus as a maintenance controller a person must know and understand the requirements of this manual and the Regulations in relation to the maintenance of a RAAus listed aircraft. This person is responsible for ensuring that all required maintenance on aircraft used for flight training has been carried out by an L2 or higher maintenance authority holder.

The person nominated may be:

- a) the registered operator of the aircraft; or
- b) the organisation's regular L2 or higher maintainer (whether directly attached to the flight training organisation or not) or;
- c) a member of staff of the flight training organisation, or;
- d) the owner of the aircraft.

#### **Aircraft Owned by more than One Person**

Where more than one person within a company or a group who own a recreational aircraft that is not used for hire and reward, one of the persons must be appointed by the owners as the maintenance controller to be responsible for and to ensure that all required maintenance on that aircraft is carried out.

The person appointed as the maintenance controller must be listed in the aircraft maintenance logbook. That person is responsible to ensure that all maintenance carried out on the aircraft is listed in the aircraft logbook by the maintainer and after that entry the name and signature of the maintainer indicating that all of the stated maintenance has been conducted in accordance with the aircraft manufacturer's requirements and the RAAus Technical Manual, in addition to all ADs, ANs, SBs and advisories.

#### **11.1.5 CRITICAL MAINTENANCE**

RAAus defect and incident reports indicate that engine controls, engine accessories, propellers and flight controls deserve special maintenance attention. These components and systems must all be secured by positive safety devices and must be checked by an independent person after maintenance and duly signed for in the aircraft logbook. This inspection may be carried out by an RAAus L1, L2, L3, L4, or RAAus Pilot Certificate holder who is familiar with the aircraft make and model.

#### **11.1.6 MAINTENANCE TASKS AND AUTHORITIES REQUIRED**

This table is not exhaustive and is subordinate in all manner to the elements detailed in subsection 11.1.3 of this Manual. An aircraft owner may engage an RAAus authorised and competent Level 2 or higher maintainer to advise, check, or carry out any maintenance of their aircraft.

**NOTE:** Any maintenance task on a LSA must be conducted by a person nominated by the manufacturer within the maintenance manuals for the aircraft.

MAINTENANCE TASK	MAINTENANCE AUTHORITY REQUIRED (Other than Group G aircraft)		
	PRIVATE OPERATIONS AMATEUR BUILT	PRIVATE OPERATIONS FACTORY BUILT	HIRE &/OR FLYING TRAINING
Pre-flight Final Inspection (FORM 007)	Builder with L4 observing	Not Applicable	Not Applicable
Daily Inspection	RPC Holder	RPC Holder	RPC Holder (not student) or Instructor
Pre-flight inspection ("walk-around")	RPC Holder	RPC Holder	RPC Holder or Instructor (including students under supervision)
Pilot Maintenance	RPC Holder or L1, L2, L4	RPC Holder or L1, L2, L4	RPC Holder, L2 or L4
Scheduled Maintenance	L1, L2, L4	L1, L2, L4	L2 or L4
Periodic Inspection	L1, L2, L4	L1, L2, L4	L2 or L4
Taxi an aircraft	RESERVED	RESERVED	RESERVED
Repairs	L1, L2, L4	L1, L2, L4	L2 or L4
Modifications	Refer to Section 6.1 of Technical Manual	Refer to Section 6.1 of Technical Manual	Refer to Section 6.1 of Technical Manual
RAAus or manufacturer Airworthiness Notices	L1, L2, L4	L1, L2, L4	L2, L4
Heavy landing inspection	L1, L2, L4	L1, L2, L4	L2, L4
Component overhaul	L1, L2, L4	L1, L2, L4	L2, L4
Component replacement	L1, L2, L4	L1, L2, L4	L2, L4
Welded repairs	L1, L2, L4	CASA Welding Authority holders	CASA Welding Authority holders
Weight and Balance activities	CASA WCO	CASA WCO	CASA WCO