



**Civil Aviation  
Advisory Publication  
July 2000**

# Flight manuals for individual aircraft

***This publication is only advisory but it gives the CASA preferred method for complying with the Civil Aviation Regulations 1988 (CAR 1988).***

***It is not the only method, but experience has shown that if you follow this method you will comply with CAR 1988.***

***Always read this advice in conjunction with the appropriate regulations.***

**Contents — see next page**

## The relevant regulations and other references

- Regulations 2(1), 54, 55, 138, 139, 322 and 323 of the *Civil Aviation Regulations 1988* (CAR 1988)

## Who this CAAP applies to

- Holders of the Certificate of Registration (CoR) for an Australian aircraft
- Industry persons who are authorised to issue Certificates of Airworthiness (CoAs)
- Industry persons who are authorised to approve flight manual information

## Why this CAAP was written

The Authority has issued revised legislation for ensuring that the information required for the safe operation of the aircraft is provided in the aircraft to the operating crew.

This CAAP was written to assist all involved to understand the new rules governing the required flight manuals, placards or other documents. Also, this CAAP provides guidance on the information required and the sources of that information.

## Status of this CAAP

This is the third issue of this CAAP on the subject of Aircraft Flight Manuals (AFMs).

This CAAP provides interim guidance pending the implementation of CASRs Parts 43 and 91. This CAAP will be cancelled when ACs in the 43 and 91 series are published.

## For further information

Contact the CASA Office closest to you.

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## 1. Background

### 1.1 INTRODUCTION

1.1.1 A new type and model of aircraft is type certificated by a National Airworthiness Authority (NAA) before production. The NAA responsible for a type certification accepted in Australia, is termed the “relevant NAA”.

1.1.2 Formerly, an AFM individually approved by the Australian Civil Aviation Safety Authority (CASA) (the Authority), or its predecessors, was required for all aircraft registered in Australia, even if the relevant NAA did not require an AFM. Specific Australian requirements often caused alterations to be made to the AFM supplied by the Type Certificate (TC) holder (who is usually the manufacturer).

1.1.3 The Authority has consulted with industry and has now simplified the procedures for managing AFMs and related information. The new procedures are harmonised with international practice as far as practicable.

### 1.2 WHAT IS THE AUTHORITY'S POLICY IN RELATION TO FLIGHT MANUALS?

1.2.1 All aircraft must have the approved information necessary for the safe operation of the aircraft, as specified in the applicable design standard, located in the aircraft and available to the pilot.

1.2.2 The approved information may be in the form of an AFM, placards or contained in another document such as a Pilot's Operating Handbook (POH). The form and content of the information is that accepted and approved by the relevant NAA for the particular serial number aircraft when it was manufactured and delivered.

1.2.3 When the TC holder has supplied an AFM that is clearly identified as an AFM approved by the relevant NAA, then that AFM will obviously become the AFM approved by the Authority for the particular aircraft type and model concerned.

1.2.4 Some aircraft were not required to be provided with an AFM, as long as the required information was provided in the form of placards or other documents. Examples of these are some older aircraft and many aircraft with a Maximum Take-off Weight (MTOW) of 2722 kg (6000 lb) or less manufactured in the USA and first flown between April 1953 and 1 March 1979. In some of these cases a POH or other operating document was provided by the TC holder.

1.2.5 When the TC holder has supplied a document (such as a POH) that is clearly identified as containing information required by the relevant NAA to be provided to the pilot, that document will become the AFM approved by the Authority for that particular aircraft type and model. (Examples of these are those POHs produced after 1975 in the General Aviation Manufacturer's Association (GAMA) format).

*Note: In some cases, aircraft of the same type and model may have different type certification bases requiring different AFMs, e.g. a Brazilian aircraft with both Brazilian and US (FAA) certification. Refer to the TC holder or agent, or the Authority if in doubt. In other cases, aircraft of the same type and model and the same type certification bases may have different AFMs according to serial number and year of manufacture.*

1.2.6 Aircraft which have not been type certificated to a civil design standard (such as some ex-military, some sport aircraft etc.) do not require an AFM, but appropriate information should be provided to the pilot.

### **1.3 WHAT ARE THE CoR HOLDER'S RESPONSIBILITIES?**

1.3.1 The CoR holder is responsible for ensuring that:

- the aircraft has the appropriate AFM (if an AFM is required);
- all approved AFM amendments are incorporated to keep the information current;

- all approved AFM supplements necessary for operating the aircraft in its actual configuration are incorporated;
- all temporary AFM amendments mandated by the Authority as Airworthiness Directives (ADs) are incorporated; and, in rare cases,
- any written directions given under subregulation 55(4) of CAR 1988 are incorporated.

1.3.2 The CoR holder may nominate another person or organisation by letter of appointment to maintain the AFM, as is often done with the maintenance of the aircraft itself.

1.3.3 Additional information, which is not AFM information, may be required to operate the aircraft. There may be additional or different operational limitations and instructions required by the Authority, such as:

- loading systems and load data sheets (See CAO 100.7);
- details concerning equipment installations required for the class of operation (e.g. IFR) (See CAO 20.18);
- operating information for certain aircraft systems;
- Minimum Equipment Lists (See regulation 37 of CAR 1988);
- weight restrictions due to operational requirements (e.g. See CAO 20.7.1B).

1.3.4 It is the responsibility of the CoR holder to ensure the pilot is provided with all the information necessary to operate the aircraft safely. How this is achieved is the CoR holder's responsibility. Such additional information is best contained in an operations manual or in a convenient folder available to the pilot, or it may be contained in the folder containing the TC holder's AFM.

#### **1.4 HOW DOES THE AUTHORITY ADMINISTER AFMs UNDER THE NEW RULES?**

- If an example of a type and model is on the Australian Register, the Authority will hold a

master copy of any required, applicable, AFM. This copy is provided by the TC holder and is kept up to date by the Authority for reference purposes.

- The Authority will issue and provide a copy of the CASA Approval Page which identifies the document that is approved as the AFM, and the initial Amendment Record Sheet to the CoR holder upon request. These pages are to be inserted at the front of the folder containing the TC holder's AFM.
- The CoR holder is also to write the aircraft registration and serial number on the Amendment Record Sheet. This page initially lists the basic approved document and subsequently, a continuous record maintained by the CoR holder of all amendments and AFM supplements for the individual aircraft. The Authority has an Amendment Record Sheet form available, or the CoR holder may use another that provides for the same information.
- When applying for a Certificate of Airworthiness (CoA), a CoR holder is to present the AFM to an industry person holding an Instrument of Appointment (IoA) to issue CoAs, or if the Authority is requested to issue the CoA, to the Authority. This person or the Authority's delegate will verify that the document:
  - is the appropriate AFM for the aircraft;
  - is the current issue;
  - contains all supplements to reflect the actual configuration and operational role of the aircraft; and
  - contains all temporary changes mandated by the Authority.

## **2. Process**

### **2.1 WHAT IS THE PROCESS FOR A CoR HOLDER TO FOLLOW?**

2.1.1 Prior to applying for the issue of a CoA, a CoR holder or nominated representative must:

- Determine in what form the required AFM information is presented. (Refer to *How do I find out what AFM or placards my aircraft should have?* on page 14). If an AFM is required, the applicant should obtain the document, issued by the TC holder in accordance with the airworthiness standards of the relevant NAA applicable to the aircraft.
- Ensure that the document is current and contains all the latest approved amendments as well as all approved supplements needed to reflect the actual configuration of the aircraft.

*Note: Only those AFM supplements relevant to the individual aircraft and its role should be included in the folder containing the TC holder's AFM. AFM supplements associated with role equipment or particular operations which are clearly identified as only effective when that role equipment is fitted or that operation is being carried out may remain in the folder when that equipment is removed.*

- Obtain a copy of the CASA Approval Page for the aircraft type from the local CASA Office and insert this at the front of the folder containing the TC holder's AFM. The CASA office will require information about your aircraft to be able to provide the correct Approval Page. Refer to Appendix A for the information required.
- Obtain a copy of the initial Amendment Record Sheet from the local CASA Office. Complete it with the appropriate information and insert the Amendment Record Sheet in the front of the folder containing the TC holder's AFM. If a Log (or List) of Effective Pages (LEP) is required to define the AFM, then identifying details of the LEP are to be entered on the Amendment Record Sheet. Subsequently, the CASA form or another form prompting for the same information may be used to record alterations.
- Present the AFM as part of the requirement for issue of a CoA.
- Provide a copy of the CASA Approval Page and the completed Amendment Record Sheet

to the local CASA Office to be placed on the aircraft file.

- The AFM for the particular aircraft is retained by the CoR holder. The Authority does not hold a copy of the AFM for each individual aircraft.

## **2.2 WHAT IF AN AFM IS NOT REQUIRED?**

2.2.1 The CoR holder must ensure that if the AFM information required to be provided for the pilot is in the form of placards, those placards are installed in the aircraft. (All placards affixed to the aircraft are independently subject to maintenance system and AD requirements).

2.2.2 The person issuing the CoA must verify that all required placards are in place.

2.2.3 An aircraft for which an AFM is not required may be eligible for operations with the door off, Mogas, glider towing etc., and these operations are subject to AFM information contained in supplements. These supplements may be kept in any convenient folder available to the pilot and should be listed, with their current amendment status, on an Amendment Record Sheet in the front of the folder. The statement "No AFM required" should be written as the initial entry on this Amendment Record sheet.

2.2.4 A copy of the Amendment Record Sheet must be provided to the local CASA Office for file.

## **2.3 WHOSE RESPONSIBILITY IS IT TO KEEP THE AFM OR PLACARDS UP TO DATE?**

2.3.1 It is the responsibility of the CoR holder to ensure that any required alterations to the TC holder's AFM, and required AFM supplements, are incorporated. The CoR holder, or the nominated representative, may amend the AFM to incorporate approved amendments or insert or remove approved supplements as appropriate.

2.3.2 Alterations to the AFM may be required because of, e.g.:



- TC holder's amendment to the AFM;
- installation or removal of a modification or a modification that is subject to a Supplemental Type Certificate (STC);
- an AD, or a direction from the Authority under subregulation 55(4) of CAR 1988.

2.3.3 Most TC holder's provide an update service for each AFM. Some update services are free to registered owners, others may be subject to an annual subscription fee. AFM changes mandated by the relevant NAA or the Authority must be incorporated.

2.3.4 AFM supplements and/or revised placards required when installing TC holder's or third party's modifications or STCs, are the responsibility of the person providing the design and are usually supplied with the installation kit.

2.3.5 The Authority will audit AFMs or placards containing the required AFM information for currency and applicability to the particular aircraft configuration and modification status. This will be undertaken during surveillance and ramp checks.

## **2.4 DO I HAVE TO NOTIFY THE AUTHORITY OF CHANGES TO MY AFM?**

2.4.1 Yes. The local CASA Office will keep a record of the CASA Approval Page and Amendment Record Sheet (which gives the composition and status of the AFM) on the individual aircraft file.

2.4.2 If any approved changes or amendments are made, or approved supplements added or deleted, the CoR holder or representative must supply a copy of the updated Amendment Record Sheet to the local CASA Office within 48 hours after the aircraft is flown for the first time after the change is made to the AFM. No further approval is required.

## **2.5 WHEN IS AN AFM SUPPLEMENT REQUIRED?**

2.5.1 An approved AFM supplement is only required when there is a need to add to or vary the

information that is required to be provided in an AFM under the design standard for that aircraft.

2.5.2 This may be as the result of:

- the incorporation of an approved modification (e.g. different engine, increase of maximum take-off weight, use of a different fuel etc.);
- the need to provide important safety information to the pilot (e.g. as a result of fitting systems such as GPWS, TCAS etc.); or
- the need to provide revised performance information to the pilot when conducting certain operations (e.g. glider towing, agricultural spraying etc.).

2.5.3 AFM supplements are not required to present non-mandatory general information which may best be contained in an owner's manual or similar document.

2.5.4 The use of approved AFM data which has been re-formatted is the responsibility of the person converting the data. Examples are presenting data that was in tabular form in chart form, conversion of units etc. Such data is not part of the approved AFM or approved supplements and does not require approval by the Authority.

2.5.5 Where an STC holder issues a complete new AFM as a replacement for the TC holder's AFM, the STC holder has the responsibility for any required amendments.

## **2.6 HOW DO I KNOW IF AFM AMENDMENTS OR SUPPLEMENTS ARE APPROVED DATA?**

2.6.1 AFM amendments and supplements issued by the TC holder, and approved by the relevant NAA, are approved data for insertion in AFMs if applicable to the particular aircraft.

2.6.2 AFM supplements associated with STCs approved by the relevant NAA are approved AFM data if applicable to the particular aircraft.

2.6.3 For an STC issued by an NAA other than the relevant NAA, refer to the Authority, as that STC may not be applicable to the aircraft.

2.6.4 AFM supplements associated with modifications approved under regulation 35 of CAR 1988, approved by the authorised person who approved the design of the modification (if authorised to do so on the IoA) or the Authority are approved AFM data if applicable to the particular aircraft.

2.6.5 For Australian ADs that require a copy of the AD, foreign AD or other specified document to be inserted in the AFM as an amendment, those specified insertions are approved AFM data.

2.6.6 Directions issued by the Authority under subregulation 55(4) of CAR 1988 are approved data regarding the AFM.

2.6.7 In all other cases, refer to your local CASA Office.

### 3. Transition arrangements

#### **3.1 WHAT IF I ALREADY HAVE AN AFM APPROVED UNDER THE FORMER REGULATION 138 OF CAR 1988?**

3.1.1 The new regulations took effect on 16 August 1999 upon a notice of the making of the regulations being published in the *Commonwealth of Australia Gazette*. Applicants seeking issue of a CoA must comply with the new regulations. However, the Authority has provided a transition period until 16 August 2000 for aircraft that currently have a CoA in the Transport Category, and until 16 August 2002 for all other aircraft.

3.1.2 CoR holders are advised to ensure they have, or obtain, for each aircraft the AFM that meets the new regulations as soon as practicable. The former AFMs may remain in effect until the end of the transition period as long as no change is required to the TC holder's AFM.

3.1.3 The CoR holder must change to the TC holder's AFM to comply with the new regulations if:

- an approved amendment to the TC holder's AFM is required;
- if it is necessary to add or remove a supplement due to a change in aircraft configuration or role;
- if a temporary change is mandated by the Authority by an AD; or
- the CoA is re-issued.

3.1.4 In this transition period the Authority will not give written directions to amend AFMs approved under the former regulation 138 of CAR 1988.

### **3.2 TRANSITION ARRANGEMENTS FOR AFMS PRODUCED BY THE AUTHORITY AND ITS PREDECESSORS KNOWN AS "CIVIL MARK 1" AND "CIVIL MARK 2" TYPE FLIGHT MANUALS.**

3.2.1 The Authority and its predecessors issued a number of "Civil Mark 1" AFMs for single engine aircraft, and "Civil Mark 2" AFMs for twin engine aircraft.

3.2.2 For aircraft not required to be provided with an AFM under the applicable airworthiness standards when the aircraft was manufactured and first flown, the CoR holder will need to ensure that the placards required are available when the Civil Mark 1 or Civil Mark 2 flight manual is no longer in effect. This applies mainly to some aircraft below 2722 kg MTOW manufactured in the USA and first flown prior to issue of POHs in the GAMA format in 1975.

3.2.3 Other aircraft were required by the relevant NAA to have an AFM issued by the TC holder, but were also issued with a Civil Mark 1 or Civil Mark 2 AFM by the Authority or predecessors. For these aircraft, the CoR holder must ensure that an AFM meeting the requirements of the new regulations is provided in the aircraft when the Civil Mark 1 or Civil Mark 2 AFM no longer applies. In some cases this may be a POH which has been approved as the AFM.

### **3.3 TRANSITION ARRANGEMENTS FOR ALL OTHER AFMS**

3.3.1 The CoR holder is required to obtain and use the TC holder's AFM that meets the requirements of the new regulations by the end of the transition period. In many cases the existing TC holder's AFM approved under the former regulation 138 of CAR 1988 with additional CASA "green" and CASA "pink" pages may simply be returned to the TC holder's configuration in accordance with the instructions given in Appendix B.

3.3.2 Previous TC holder's AFMs, or TC holder's AFMs with supplements, produced especially for Australia may continue to be used as the AFM satisfying the new regulations provided they are supported by the TC holder and are still relevant to the individual aircraft. If not, the CoR holder must transition to the TC holder's AFM .

*Note: The CoR holder has the responsibility to ensure that any previously issued local supplement is compatible with the TC holder's AFM that meets the new regulations. Some supplements may need to be re-approved if changes other than re-formatting are required. (The CoR holder should contact the Authority if in any doubt about this.)*

### **3.4 DELAY IN OBTAINING THE AFM**

3.4.1 The Authority recognises that in some cases where the CoR holder is required to transition to the TC holder's AFM prior to the end of the transition period, there may be some delay in obtaining the required TC holder's AFM. Until the end of the transition period, if the CoR holder can show documentary evidence of the action taken to obtain the document, the aircraft may continue to fly using the old AFM until the document is obtained provided that any required amendment or supplement is compatible with the old AFM. However, the CoR holder should advise CASA if there is likely to be any significant delay in obtaining the required AFM.

*Note: The CoR holder will be in breach of the new regulations if the aircraft is flown after the end of*

*the transition period without an AFM complying with the new legislation. Thus CoR holders are urged to begin the transition to the new system so as to not be held up at the end of the transition period.*

### **3.5 NOTIFICATION TO THE AUTHORITY**

3.5.1 When the CoR holder changes over to the TC holder's AFM that conforms to the requirements of the new regulations (with a new, replacement, or revised AFM), the CoR holder must supply a copy of the CASA Approval Page and the completed Amendment Record Sheet to the local CASA Office within 48 hours of the aircraft being flown for the first time after the change is made.

## **4. Detail information**

### **4.1 MUST THE AFM OR PLACARDS BE IN ENGLISH?**

4.1.1 Yes.

### **4.2 WHERE ARE SUPPLEMENTS TO BE LOCATED IF AN AFM IS NOT REQUIRED?**

4.2.1 For aircraft not required to have an AFM because an AFM was not required when the aircraft was produced, supplements may be located in the aircraft in any convenient folder available to the pilot.

4.2.2 AFM supplements should be in the form as provided by the TC holder, or otherwise in the GAMA format. The supplements should be suitably identified and appropriately recorded on the Amendment Record Sheet, a copy of which should then be given to the Authority.

### **4.3 HOW DO I FIND OUT WHAT AFM OR PLACARDS MY AIRCRAFT SHOULD HAVE?**

4.3.1 The TC holder or distributor or local agent are the prime sources for determining what is required.

4.3.2 The TC holder provides the AFM required when the aircraft is delivered. A replacement copy can usually be obtained from the TC holder, or through the distributor or local agent.

4.3.3 Placards required to be fitted to the aircraft by the applicable airworthiness standards of the relevant NAA are independently subject to maintenance system and AD requirements

4.3.4 The Type Certificate Data Sheet (TCDS) for each aircraft type usually indicates how the required AFM may be identified, as well as listing the placards required by the relevant NAA, as part of the aircraft type certification. Many maintenance organisations have access to this data.

4.3.5 If you are unsure of what manuals or placards you should have, contact your maintenance organisation, the TC holder, the distributor or local agent for the aircraft and seek advice.

#### **4.4 WHAT IF AN AFM IS REQUIRED FOR AN OLD AIRCRAFT BUT CANNOT BE FOUND?**

4.4.1 A CoA cannot be issued until the aircraft has the appropriate AFM. It is the responsibility of the CoR holder to have, or obtain, the appropriate AFM. If the TC holder no longer exists, the relevant NAA, aircraft owner association or another individual aircraft owner may be able to provide a true copy of the certificated AFM. The Authority, or the person issuing the CoA, must be satisfied (by means of copies of the relevant correspondence) that the CoR holder has tried but been unsuccessful in obtaining the appropriate AFM from the normal sources and that the copy submitted is a true copy before accepting that copy to be the approved AFM.

4.4.2 If the CoR holder has been unsuccessful in locating a copy, the CoR holder may choose to prepare an AFM for approval by the Authority. The most appropriate way to do this would be to engage the services of the holder of an IoA under regulation 35 of CAR 1988. The applicable design standard, as usually summarised in the TCDS, states the information (including limitations) required to be in the AFM. For aircraft with an MTOW less than 5700 kg, the GAMA POH/AFM format is preferred for the presentation of that information. However, responsibility for any required future amendments rests with the CoR holder.

#### **4.5 WHAT UNITS OF MEASUREMENT ARE REQUIRED?**

4.5.1 The preferred units of measurement are as contained in AIP GEN 4:

Weights	kilograms
Aeroplane dimensions	millimetres
Distances (e.g. landing)	metres
Liquid quantities	litres
Speeds	knots
Altitudes & vertical distances	feet
Rate of climb	feet per minute
Pressures	kilopascals
Temperatures	degrees Celsius
Altimeter setting	hectopascals

4.5.2 The units of measurement used in placards and on instrument markings as well as their consistency are independently subject to maintenance system and AD requirements.

##### **4.5A For Australian manufactured aircraft**

4.5A.1 The units are to be (where practicable) in the preferred system.

##### **4.5B For imported aircraft**

4.5B.1 The preferred system of units for all measurements is recommended. However, the units of measurement in the AFM produced by the TC holder and approved by the relevant NAA may remain unchanged. It will be the responsibility of the CoR holder, operator or pilot to provide appropriate conversion data if necessary to ensure that communications with ATC are in the preferred units and that the aircraft is operated without hazard.

#### **4.6 ARE AIRSPEEDS TO BE QUOTED IN IAS OR CAS?**



4.6.1 The airspeed datum(s) (IAS, CAS or both) specified in the AFM approved by the relevant NAA and produced by the TC holder need not be changed

4.6.2 The airspeed datum(s) used in placards and instrument markings, as well as their consistency, are independently subject to maintenance system and AD requirements.

#### **4.7 WHAT ABOUT WEIGHT AND BALANCE DATA?**

4.7.1 The limitations section of the approved AFM and placards contain the certification weights and the centre of gravity envelope limits.

4.7.2 The determination of the empty weight, empty weight centre of gravity position of an aircraft and the loading data is required to be approved by a Weight Control Officer (see CAO 100.7). This data may be inserted in the folder containing the TC holder's AFM without further approval, or contained in another suitable document available to the pilot.

4.7.3 The CoR holder has the responsibility to ensure that the pilot is aware of the need to use this loading data to comply with the limitations in the TC holder's AFM, and any other limitations required by the Authority.

*Note: The loading data approved under CAO 100.7 overrides any loading data contained in the TC holder's AFM.*

#### **4.8 WHAT ABOUT ADDITIONAL OPERATIONAL PERFORMANCE DATA?**

4.8.1 The AFM is no longer required to contain operational limitations or operational performance data additional to AFM information approved by the relevant NAA.

4.8.2 Operators should be aware that some operational requirements require extra or factored runway performance information. Such additional operational performance data required by the Authority e.g. weight limitation for runway performance, requires approval by the Authority, but

is not required to be an AFM supplement, if the basic performance as detailed in the AFM can still be achieved.

4.8.3 Such information is best contained in an operations manual, or in a convenient folder available to the pilot, or could be contained in the folder containing the TC holder's AFM.

#### **4.9 WHAT ABOUT RADIO SYSTEMS OPERATING LIMITATION PAGES?**

4.9.1 Radio Systems Operating Limitation page(s) that were approved by the Authority are no longer required.

4.9.2 The avionic equipment installed to support a particular class of operation (e.g. IFR), and the approval status of the equipment, is controlled through the maintenance system. The class of operation permitted is indicated on the maintenance release.

#### **4.10 ARE EQUIPMENT LISTS REQUIRED?**

4.10.1 Equipment Lists are not required in the AFM, unless contained in the AFM issued by the TC holder.

#### **4.11 WHERE DO I OBTAIN A DOOR-OFF OR OTHER LOCAL AFM SUPPLEMENT?**

4.11.1 Any such supplement must be approved. This could be by means of:

- TC holder's approved data;
- approved STC data;
- a local AFM supplement approved by the Authority or a person holding an IoA under regulation 35 of CAR 1988 if that person is authorised to do so on the IoA; or
- other AFM supplement approved by the Authority.

#### **4.12 HOW ARE AFMs AND AFM SUPPLEMENTS APPROVED?**

4.12.1 TC holder's AFMs are approved as part of the certification data by CASA or the relevant NAA. This includes TC holder's AFM supplements and annexes.

4.12.2 Supplements to TC holder's AFMs required as the result of third party STCs are approved as part of the STC certification data by CASA or the NAA that issued the STC. Should the STC supplement not be appropriate for incorporation in the AFM of an Australian aircraft, a revised supplement would need to be approved by the Authority under regulation 55(4).

4.12.3 Supplements to TC holder's AFMs required as the result of a modification other than an STC must be approved by the Authority, or by the authorised person who approved the design (if that person is authorised to do so on the IoA) under regulation 35 of CAR 1988.

4.12.4 Other AFM supplements not specifically associated with an STC or modification (e.g. those with revised operational role performance due to glider towing, banner towing, one engine inoperative ferry etc.) must be approved by the Authority under subregulation 55(4) of CAR 1988.

#### **4.13 WHAT ARE THE REQUIREMENTS FOR MOGAS AFM SUPPLEMENTS?**

4.13.1 If the use of alcohol free automotive gasoline is already approved as manufacturer's data under the TC, the TC holder's manual will already contain the AFM information.

4.13.2 In all other cases (except for some previous approvals by the Department of Transport and Communication (DOTC) for certain Cessna aircraft to use leaded automotive gasoline), an STC for the engine and an STC for the airframe are required to use alcohol free automotive gasoline. These STCs will require appropriate AFM supplements approved by the Authority.

4.13.3 No further DOTC approved AFM supplements will be issued. When there is a change of CoR holder, the new CoR holder will be required to purchase and incorporate STCs for the engine and airframe. This has the added benefit of allowing the use of unleaded alcohol free fuels.

#### **4.14 WHAT IS REQUIRED IF THE AIRCRAFT REGISTRATION MARK IS CHANGED?**

4.14.1 Change of registration requires a new CoA and hence an AFM that meets the requirements of the new legislation.

#### **4.15 MUST THE AFM BE CARRIED IN THE AIRCRAFT?**

4.15.1 For aircraft operated under an Air Operators' Certificate, the AFM need not be carried in the aircraft, provided that an operations manual is carried which contains all of the required AFM information and which does not conflict with the AFM. An exemption is no longer required. If the AFM is amended, then the affected parts of the operations manual must be amended. All other aircraft for which an AFM is required must carry the AFM.

#### **4.16 WHAT ARE THE AFM REQUIREMENTS FOR AMATEUR-BUILT (ABAA) OR AMATEUR-BUILT EXPERIMENTAL AIRCRAFT?**

4.16.1 These aircraft may not necessarily be required to have an AFM but, for these aircraft, it is expected that sufficient information to operate the aircraft safely will be available to the pilot. This may be in some form of document (provided by the designer or owner) and/or placards. Design standards such as FAR 23 give information as to the information that should be presented in such a document. For aircraft less than 5700 kg, the GAMA POH/AFM format is preferred for the presentation of that information.

4.16.2 As a minimum, the following information should be provided to the pilot:

- airspeed limitations;

- powerplant limitations;
- weight and balance and loading information;
- operations permitted;
- normal and emergency procedures; and
- minimum field length for take-off and landing.

#### **4.17 WHAT ARE THE AFM REQUIREMENTS FOR OTHER SPORTING AIRCRAFT?**

4.17.1 There are no AFM requirements for:

- hang gliders operated under CAO 95.8;
- ultralight aircraft operated under CAOs 95.10 and 95.55;
- gyroplanes operated under CAO 95.12 and CAO 95.12.1;
- weightshift aircraft and powered parachutes operated under CAO 95.32.

#### **4.18 WHAT ARE THE AFM REQUIREMENTS FOR MANNED FREE BALLOONS AND GLIDERS?**

4.18.1 Manned free balloons and gliders are treated the same as other certificated aircraft.

#### **4.19 WHAT ARE THE AFM REQUIREMENTS FOR HISTORIC AND EX-MILITARY, LIMITED AND EXPERIMENTAL AIRCRAFT?**

4.19.1 Since these aircraft do not necessarily conform to civil airworthiness standards, there may be no formal requirement to have an AFM. The aircraft should be operated in accordance with the manuals, pilot's notes, placards etc. provided for the aircraft (by a military authority or manufacturer for example), and a statement to this effect entered on the CoA, or the aircraft must be operated in accordance with the limitations specified for the aircraft on the CoA.

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Aviation Safety Standards

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**APPENDIX A****Information required for the Authority to issue a new CASA Approval Page**

The Authority requires adequate information to be able to establish, within a reasonable time, the correct AFM for a particular aircraft and therefore the correct details to put into the AFM database and the CASA Approval Page. As with many aircraft types and models, there may be more than one AFM relevant to the same model aircraft. Also, it can be difficult to correlate a specifically identified (e.g. by part number) AFM document to the serial number range.

Therefore, in requesting the CASA Approval Page and new Amendment Record Sheet for the AFM, it is important to supply the Authority with a document identifier (e.g. part number) of the AFM document as well as the aircraft serial number and registration. For all AFM information requests the following must be supplied:

- Aircraft Type & Model (as specified on the aircraft data plate(s));
- Aircraft Serial No. (as specified on the aircraft data plate(s));
- Aircraft Registration;
- TC holder's Flight Manual Part No. and current revision status;
- CoA Date of issue and No. (if known);
- Airworthiness Category (if known);
- Whether or not the aircraft type and model is subject of a TC, a Certificate of Type Approval under CAR 22A or is (or expected to be) subject of a Type Acceptance Certificate under CAR 21.29A. If known, please supply the relevant certificate No.; and
- The degree of urgency (i.e. the target date by which the pages are required), so that priorities can be fairly established.

*NOTE: The reason for ensuring that correct information is obtained from the data plate is that the data plate defines the type design. This is of importance in the case of heavily modified aircraft which must have the basic AFM for the type design (as per the data plate) combined with the appropriate AFM Supplement(s) to cover the modification(s). A properly carried out model upgrade will be reflected in a change to the data plate or, as per FAA preferred practice, the addition of a supplemental data plate.*

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## **APPENDIX B**

### **INSTRUCTIONS FOR MAKING AFMs COMPLIANT WITH THE NEW AUSTRALIAN AFM REGULATIONS**

#### **1. General**

1.1 New Aircraft Flight Manual (AFM) regulations 54, 55 and 322 of CAR 1988 were gazetted on 16 August 1999. All Australian aircraft are required to have the relevant AFM document issued by the Type Certificate holder (TC holder) (which is usually the Manufacturer), and thus be in compliance with these new regulations, the end of the transition period.

1.2 The new system is summarised as follows:

- All aircraft are required to have the AFM document (if one is required) that was issued by the TC holder;
- The AFM document must be kept current with amendments issued by the TC holder;
- To account for the configuration and operational role(s) of the aircraft, the appropriate approved AFM supplements must be included with the TC holder's AFM;
- All Airworthiness Directive (AD) mandated temporary AFM changes must be included; and
- At each change to the AFM or any of the AFM supplements, the local CASA office where the aircraft file is held must be informed, in writing, so that the composition of the AFM and supplements can be established at any time.

1.3 Since 16 August 1999, a CoR holder has been responsible for ensuring that the AFM, all required AFM supplements and all Airworthiness Directive (AD) mandated temporary AFM changes are correct and up to date. If further clarification of the new system for AFMs is required, the CoR holder should contact the Maintenance organisation for the aircraft or the local CASA office that is responsible for the aircraft file.

#### **2. Reconfiguring an Existing CASA Approved AFM Document to Comply with the New AFM Regulations**

2.1 The CoR holder must ensure that the aircraft is provided with the correct AFM document issued by the TC holder and that the new CASA Approval Page is the correct one for it. Also, the CoR holder must ensure that this AFM document is at the latest revision status. If this is not clear, the CoR holder should contact the TC holder, the distributor or the local agent to confirm these details for the aircraft model and serial number, as stamped on the aircraft data plate, of the aircraft concerned. The existing CASA pages in the AFM are then revised as follows:

<u>PAGE</u>	<u>INSTRUCTIONS</u>
Old CASA Approved Flight Manual page	Remove
Old CASA Approved Flight Manual page for the individual aircraft	Remove
CASA Green Log of Pages	Remove
CASA Green Introduction Page	Remove
CASA Green Supplement Listing (if any)	Remove
New CASA Approval Page	Insert
New CASA Amendment Record Sheet	<ul style="list-style-type: none"> <li>• Insert.</li> <li>• Add aircraft Registration and serial number at the top.</li> <li>• Date left column, sign right column and rule off.</li> <li>• For each new AFM amendment, new AFM supplement or AD mandated change to the AFM added to or removed from the AFM at the time of change-over, record the appropriate details in the centre section, date left column, sign right column and rule off</li> </ul>
Old General amendment record sheet	Rule off diagonally so that no more entries can be made.
Old Particular amendment record sheet	Rule off diagonally so that no more entries can be made.
Other old CASA pages such as CASA Green pages facing certain pages in the AFM or CASA "Pink Page" directives to change the AFM.	<u>Retain</u> in the AFM until terminated or superseded by new or revised CASA ADs or AFM amendments issued by the TC holder, as explained in the section below entitled "Procedures for Old CASA Pages in AFMs'.

2.2 A CoR holder with more than one aircraft (for which one specific AFM document is required) should make enough copies of the new CASA Approval Page and new amendment record sheet to amend the AFM for each aircraft.

2.3 After carrying out the changeover instructions, the CoR holder must send a copy of the new CASA Approval Page, plus a copy of the new Amendment Record Sheet (completed as required), to the local CASA office where the aircraft file is held.

2.4 Subsequently, on each occasion that the CoR holder makes a change to the AFM (e.g. AFM amendments issued by the TC holder or new AFM supplements are added or removed) the CoR holder must record the appropriate details concerning that change on the new Amendment Record Sheet. The CoR holder must then send a copy of that revised Amendment Record Sheet to the local CASA office where the aircraft file is held.

### 3. Procedures for Old CASA Pages in AFMs

3.1 Over the years, the old CASA Green Pages and some CASA "Pink Page" directives have been put into TC holder's AFMs for various purposes. In recent times, many AFMs have been changed over to comply with the new AFM regulations. Because of the practical difficulties involved in checking and accounting for these old CASA Pages at each AFM changeover, the following three stage process has been adopted:

**Stage 1** is where the CoR holder changes over the AFM to comply with the new AFM regulations. At this point the CoR holder carries out the procedures as explained in Section 2 above. The old CASA pages are retained at this stage

**Stage 2**, is where the CoR holder (as part of the CoR holder's new responsibility for AFM maintenance) assesses the remaining old CASA pages for validity and currency and takes action as follows:

- (a) remove each old CASA page that relates to an AD which is now:
  - (i) cancelled or amended;
  - (ii) replaced by a new AD that contains the temporary AFM change instruction;
  - (iii) superseded by the TC holder incorporating that AFM change in a TC holder's AFM amendment; or
  - (iv) subject to a terminating action of some other kind;
- (b) remove each old CASA page that relates to extra local certification requirements. (If the local certification requirements are still valid (e.g. small aircraft transport category) the AFM information on those pages must be converted into appropriate CASA approved AFM supplements);
- (c) remove any other old CASA page that does not clearly relate to an AD mandated change to the AFM. Such an old CASA page may have been derived by local Flying Operations (e.g. 20 series CAO) requirements or may have an origin that cannot be explicitly determined;
- (d) retain each remaining old CASA page that relates to a currently valid and applicable AD which has not been replaced by a new CASA AD that contains the temporary AFM change instruction.

**Stage 3** is the progressive, case by case assessment by CASA and replacement of each remaining currently valid old CASA page (as per subparagraph (d) of Stage 2 above) by an appropriate new CASA AD or revised existing CASA AD. CoR holders will be progressively notified of CASA AD updates and changes via the normal CASA AD processes.

*NOTE: A new aircraft being placed on to the register will not have all the currently valid old CASA pages (as per subparagraph (d) of Stage 2 above). It is the responsibility of the CoR holder for such an aircraft to make the necessary enquiries and obtain a copy of each currently valid old CASA page to be incorporated into the AFM before the issue of the CoA.*

#### 4. Policies on Local CASA Approved Changes to TC holder's AFMs

Following the introduction of the new AFM regulations in August 1999, the policies concerning CASA approved local changes to Type Certificate (TC) holder's AFMs are as follows:

- The old standard practice of conveying CASA Mandated Temporary AFM changes (e.g. from an AD) by issuing temporary CASA Green Page AFM amendments is discontinued. The standard method now used for conveying CASA Mandated Temporary AFM changes is by a CASA AD which specifies that AFM change and permits the option that the change may be accomplished by placing a specified document into the AFM.
- A previous practice of accounting for miscellaneous CASA approved local changes to the TC holder's AFM by putting CASA Green Pages into the TC holder's AFM is no longer permitted. Now, the standard method for

accounting for a CASA approved local change to a TC holder's AFM is by means of an appropriate CASA approved AFM supplement.

- AFM supplements are required when some of the approved limitations and instructions in the TC holder's AFM are required to be changed, usually because of some physical change to the particular aircraft concerned.
  - AFM supplements are NOT required to account for CASA mandated operational (i.e. the 20 series CAOs) requirements. Operational requirements do not change the certificated limitations and instructions in the AFM. If the operational requirements are applicable they must be complied with in any case. It is unnecessary to have AFM supplements to cover these requirements which can be covered by appropriate information and instructions in company or operations manuals.
  - AFM supplements are NOT required to account for AD-GEN (e.g. AD-GEN 4 or AD-GEN 73) requirements that do not explicitly mandate any change to the AFM.
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