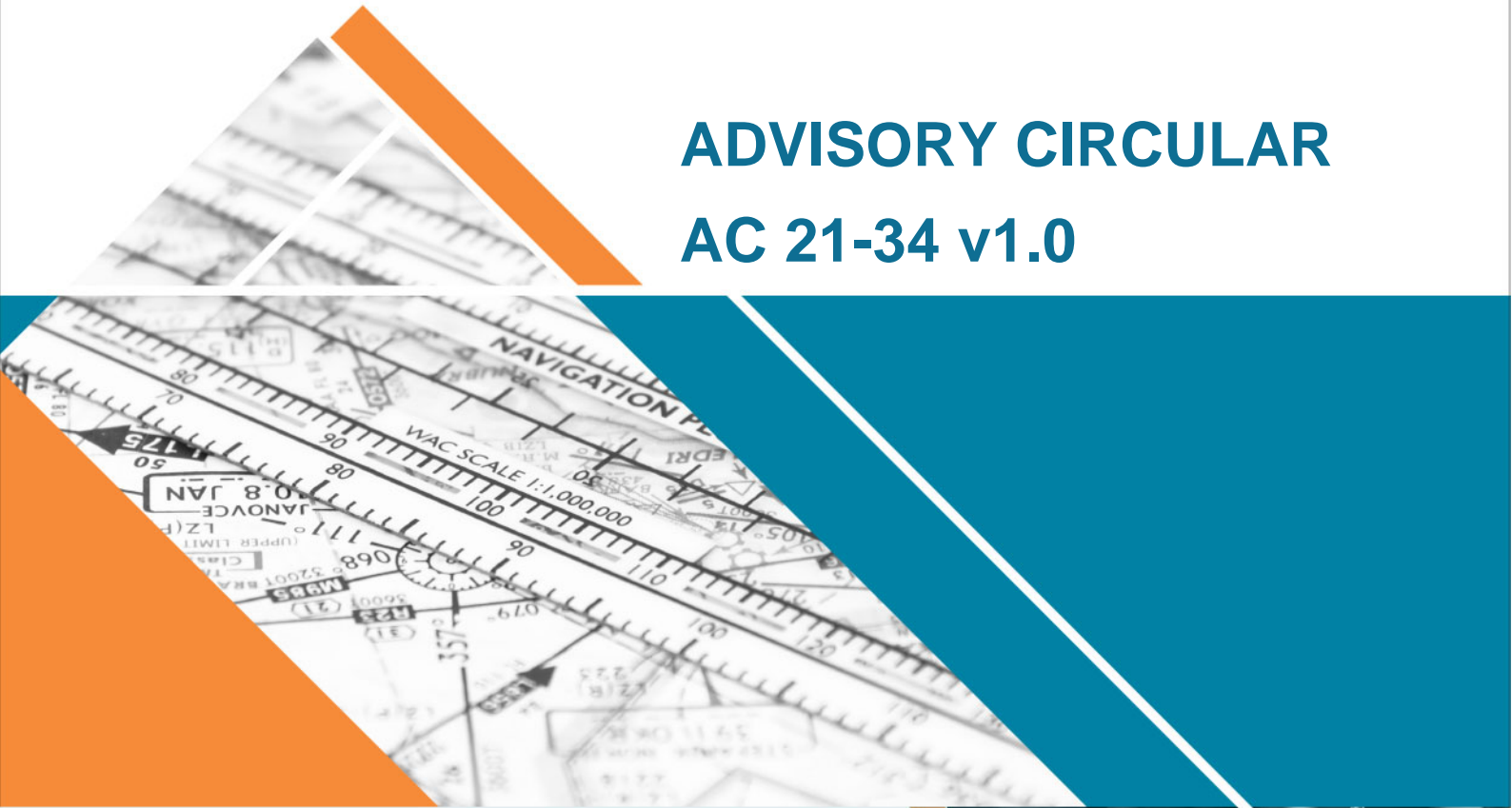




# ADVISORY CIRCULAR

## AC 21-34 v1.0



# Aircraft flight manuals



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<b>Date</b>	May 2017
<b>File ref</b>	D15/491175

Advisory Circulars are intended to provide advice and guidance to illustrate a means, but not necessarily the only means, of complying with the Regulations, or to explain certain regulatory requirements by providing informative, interpretative and explanatory material.

**Advisory Circulars should always be read in conjunction with the relevant regulations.**

## Audience

This advisory circular (AC) applies to:

- registered operators of Australian aircraft
- authorised persons who issue Certificates of Airworthiness (CofA)
- authorised persons who approve flight manual information
- approved design organisations (ADO)
- authorised persons for Subpart 21.M
- holders of modification/repair design approvals for aircraft, aircraft engines, propellers and appliances
- applicants for approval of modifications or repairs
- aircraft owners
- pilots
- maintainers
- continuing airworthiness management organisations (CAMO)
- approved maintenance organisations.

## Purpose

The purpose of this AC is to provide information on Aircraft Flight Manuals (AFM), including approval of AFMs, changes to AFMs and AFM supplements.

## For further information

For further information, contact CASA's Airworthiness and Engineering Branch (telephone 131 757).

Unless specified otherwise, all subregulations, regulations, divisions, subparts and parts referenced in this AC are references to the *Civil Aviation Safety Regulations 1998 (CASR)*.

## Status

This version of the AC is approved by the Manager, Airworthiness and Engineering Branch.

Version	Date	Details
v1.0	May 2017	Initial issue of this AC. The AC supersedes CAAP 54-1(2), dated July 2000, and shall be used as the primary guidance on aircraft flight manuals.

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# 1 Reference material

## 1.1 Acronyms

The acronyms and abbreviations used in this AC are listed in the table below.

<b>Acronym</b>	<b>Description</b>
AC	advisory circular
ADO	Approved Design Organisation
AFM	Aircraft Flight Manual
ASETPA	Approved single engine turbine powered aeroplane
ATA	Air Transport Association (USA)
CAAP	Civil Aviation Advisory Publication
CAO	Civil Aviation Order
CAR	<i>Civil Aviation Regulations 1988</i>
CASA	Civil Aviation Safety Authority
CASR	<i>Civil Aviation Safety Regulations 1998</i>
CofA	Certificate of Airworthiness
EASA	European Aviation Safety Agency
EDTO	Extended diversion time operations
EFB	Electronic Flight Bag
FAA	Federal Aviation Administration (USA)
FAR	Federal Aviation Regulation (USA)
GAMA	General Aviation Manufacturer's Association (USA)
IATA	International Air Transport Association
ICAO	International Civil Aviation Organization
LSA	Light sport aircraft
MTOW	Maximum Take-off Weight
NAA	National Aviation Authority
POH	Pilot's Operating Handbook
RAAOs	Recreational Aviation Administration Organisations
STC	Supplemental Type Certificate
TAC	Type Acceptance Certificate
TC	Type Certificate
TCDS	Type Certificate Data Sheet
UK CAA	Civil Aviation Authority of the United Kingdom

## 1.2 Definitions

Terms that have specific meaning within this AC are defined in the table below.

Term	Definition
Aircraft flight manual	A manual that is part of the certification basis of the aircraft, containing the operating limitations within which the aircraft is considered airworthy, and any other information required for the safe operation of the aircraft, including all amendments and supplements for that manual.
Airworthiness requirements	The comprehensive and detailed requirements established, adopted or accepted under the regulations for the airworthiness of the aircraft or aeronautical product. The airworthiness requirements include the applicable airworthiness standards and additional airworthiness requirements such as airworthiness directives (AD), Part 90 requirements and airworthiness requirements associated with operational approvals such as extended diversion time operations (EDTO) and approved single engine turbine powered aeroplane (ASETPA).
Airworthiness standards	The design standards applicable to the aircraft or aeronautical product for approval or certification under Part 21. Airworthiness standards for type certificated aircraft, engines and propellers are set out in Parts 22 to 35.
Airworthy	An aircraft or aeronautical product is airworthy if it is in a state that conforms with its approved design and is in a condition for safe operation.
Approved design organisation (ADO)	A design organisation approved under Subpart 21.J to carry out design activities under Part 21. An ADO's scope of approval may include approval and certification activities for modification/repair designs under Subpart 21.M and approval of changes to flight manuals.
Certification basis	Certification basis means: <ol style="list-style-type: none"> <li>for an aircraft, aircraft engine or propeller for which there is a type certificate or type acceptance certificate—the type certification basis for the aircraft, aircraft engine or propeller</li> <li>for an aeronautical product, other than an aircraft engine or propeller, that is approved in a manner mentioned in regulation 21.305 or 21.305A—the airworthiness standards that applied for certification of the product</li> <li>for an aircraft or aeronautical product not mentioned in (a) or (b) above—the airworthiness standards that applied for certification of the aircraft or aeronautical product (however described).</li> </ol>
Modification	A change to the design of an aircraft or aeronautical product which is not a repair.
Modification/repair design approval	An approval granted under regulation 21.435 or 21.437.
Repair	The restoration of an aircraft or aeronautical product to an airworthy condition. This AC deals with repairs that involve a design change.
Supplemental type certificate (STC)	An approval issued or accepted, if issued by a foreign NAA, by CASA under Subpart 21.E of a major modification or repair of a type certificated aircraft, engine or propeller.
Technical data	For the design of an aircraft, aircraft engine, propeller or appliance, or for the design of a modification of, or repair to, an aircraft, aircraft engine, propeller

Term	Definition
	<p>or appliance, means:</p> <ol style="list-style-type: none"> <li>a. data that describes the design, including: <ol style="list-style-type: none"> <li>i the drawings and specifications necessary to define the configuration and design features of the aircraft, aircraft engine, propeller or appliance, or of the modification or repair, and a list of those drawings and specifications; and</li> <li>ii information on dimensions, materials and processes necessary for making the aircraft, aircraft engine, propeller or appliance, or the modification or repair; and</li> <li>iii the airworthiness limitations section of the instructions for the continued airworthiness of the aircraft, aircraft engine, propeller or appliance; and</li> <li>iv the operating limitations and other information necessary for the safe operation of the aircraft, aircraft engine, propeller or appliance; and</li> <li>v any other data necessary to determine the airworthiness of the aircraft, aircraft engine, propeller or appliance; and</li> </ol> </li> <li>b. engineering reports, including test plans and reports, used to show that the design complies with the applicable airworthiness standards for an instrument for the design.</li> </ol>
Type acceptance certificate (TAC)	A document issued by CASA to accept the design of a type of aircraft approved via a foreign type certificate issued by a recognised country.
Type certificate (TC)	A document issued by CASA to define the design of a type of aircraft, aircraft engine or propeller and to certify that the design meets the applicable airworthiness requirements. TCs issued by foreign NAAs are either accepted in Australia by the issue of applicable TACs or validated and an Australian TC issued on the basis of the validation process.
Type certificate data sheet (TCDS)	A document that forms part of the type certificate providing the technical details and limitations of the aircraft, aircraft engine or propeller.
Type certification basis	The airworthiness standards and any special conditions or other conditions with which the aircraft, aircraft engine or propeller must comply for the issue of a type certificate.
Type design	The basic design of a type certificated aircraft, aircraft engine or propeller.

## 1.3 References

### Regulations

Regulations are available on the Federal Register of Legislation website <https://www.legislation.gov.au/>

Document	Title
CASR	<i>Civil Aviation Safety Regulations 1998</i>
CAR	<i>Civil Aviation Regulations 1988</i>

**Advisory material**

CASA's advisory circulars are available at <http://www.casa.gov.au/AC>

CASA's Civil Aviation Advisory Publications are available at <http://www.casa.gov.au/CAAP>

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<b>Document</b>	<b>Title</b>
AC 21-08	Approval of modification and repair designs under Subpart 21.M
AC 21-42	Light sport aircraft manufacturers' requirements
CAAP 233-1	Electronic Flight Bags
CAAP 235A-1	Minimum Runway Width - for aeroplanes engaged in RPT and charter operations with a maximum take-off weight greater than 5700 kg

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**Other documents**

EASA documents are available at <http://easa.europa.eu/>

EASA CS-22

EASA CS-VLA

EASA CS-23

EASA CS-25

EASA CS-27

EASA CS-29

EASA CS-31GB

EASA CS-31HB

FAA documents are available at <http://www.faa.gov/>

FAA AC 23-15

FAA AC 25.1581-1

FAA AC 27-1

FAA AC 29-2

FAA Order 8300.16

ICAO documents are available at <http://www.icao.int/>

ICAO Annex 6

ICAO Annex 8



## 2 Aircraft flight manuals

### 2.1 Introduction

- 2.1.1 The International Civil Aviation Organization (ICAO) Annex 8 requires that each aircraft be provided with a flight manual, placards or other document stating the approved limitations within which the aircraft is considered airworthy as defined by the appropriate airworthiness requirements, additional instructions and information necessary for the safe operation of the aircraft.
- 2.1.2 CASA regulations comply with the provisions of ICAO Annex 8 as described in paragraph 2.1.1.
- 2.1.3 The CASR Dictionary defines the meaning of an aircraft's flight manual (AFM). Under this definition, a reference to a flight manual in the CASR and *Civil Aviation Regulations 1988* (CAR) includes an AFM or any other document that contains the aircraft's operating limitations and other information required for the safe operation of the aircraft, including all amendments and supplements for an AFM or the other document, as applicable.<sup>1</sup>

### 2.2 General

- 2.2.1 An AFM is part of the type design as required by the type certification basis that the aircraft was originally certificated to. In some cases the original certification requirements are changed by a Supplemental Type Certificate (STC), mandating the provision of an AFM even though the original type certification basis did not require the provision of an AFM.
- 2.2.2 All AFMs are identified by a part number like any other critical part of the aircraft. The primary source for identifying the AFM applicable to a particular aircraft is the Type Certificate Data Sheet (TCDS). If there is uncertainty as to which AFM is applicable to a particular aircraft, the type certificate (TC) holder or the manufacturer can provide that information based on the make, model and serial number of the aircraft. The relevant CASA Local Office may also help in identifying the applicable AFM.

### 2.3 Format of AFMs

- 2.3.1 An AFM is a manual provided for an aircraft which states the approved limitations within which the aircraft is considered airworthy, as defined by the appropriate airworthiness requirements, including additional instructions and information necessary for the safe operation of the aircraft.
- 2.3.2 An AFM is usually clearly identified as an AFM. For some older aircraft, the AFM may be referred to as the Pilot's Operating Handbook (POH), Owner's Handbook or Owner's Manual.
- 2.3.3 An AFM may consist of approved and unapproved parts.

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<sup>1</sup> See Clause 37 of Part 2 of the CASR Dictionary.

- 2.3.4 Approved parts of the AFM are approved by the applicable national aviation authority (NAA), based on the type certification requirements effective at the time of certification. The content of approved parts of the AFM must satisfy requirements of regulation 23.1581, 25.1581, 27.1581 or 29.1581, or similar, as applicable.
- 2.3.5 Unapproved parts of the AFM are provided by the manufacturer additionally, as deemed necessary for the safe operation of the aircraft, and cannot conflict with approved parts of the AFM. Each approved part of the AFM is clearly distinguished from any unapproved part of that AFM.
- 2.3.6 Some older AFMs comply with older airworthiness standards and may contain only unapproved information, provided by the manufacturer as deemed necessary for the safe operation of the aircraft. For example, AFMs titled Owner's Handbook or Owner's Manual.
- 2.3.7 Aeroplanes up to 5,700 kg (or 12,500 lb) maximum take-off weight (MTOW), whose type certification required the provision of an AFM and were manufactured in 1976 or later, usually have their AFM provided in the US General Aviation Manufacturer's Association (GAMA) Specification No. 1, 'Pilot's Operating Handbook' (POH) format.<sup>2</sup> AFMs prepared in accordance with these specifications are titled either 'Pilot's Operating Handbook' or 'Pilot's Operating Handbook and FAA Approved Airplane Flight Manual', and meet the regulatory requirements.

Note Aircraft of the same type and model with the same type certification basis may have their approved information necessary for the safe operation of the aircraft set out in different ways (AFM, placards, or a combination of AFM and placards) according to their aircraft serial number and year of manufacture.

### 2.3.8 AFM performance section – digitalised format

- 2.3.8.1 Modern transport category aeroplanes, type certificated under Part 25, are usually certified with their performance information provided by the manufacturer and approved by the NAA in digitalised format. The digitalised parts replace or supplement relevant parts of the AFM. Therefore, the approved AFM in these cases consists of the AFM and the digitised performance (program and databases, using the International Air Transport Association (IATA) SCAPs<sup>3</sup>). Relevant parts of the AFM are required to clearly state the program and database versions that must be used to calculate the certified performance for the particular aeroplane.

<sup>2</sup> The GAMA Specification No. 1 was developed by representatives of member companies of the General Aviation Manufacturer's Association for use in preparing Pilot's Operating Handbooks that meet government regulatory requirements and meet industry standards for scope of material, arrangement, nomenclature and definitions. The Specification provides guidance for a large group of aeroplanes, consequently not all of the material in the Specification is applicable to any one model. Manufacturers may omit material inappropriate to a specific aircraft type or model.

<sup>3</sup> SCAP: Standardised Computerised Aircraft Performance; a standard created by IATA, Air Transport Association (ATA) and several manufacturers to achieve maximum possible standardisation of the performance program interface. There are six SCAP Specifications: Take-off, Landing, Climbout, Inflight, Noise and APM (Aircraft Performance Monitoring), applicable to civil, transport category airplanes. SCAPs generally use "first principle" methods to calculate real on-time performance data, however some SCAPs for older aircraft may interpolate between points of the tabulated (pre-computed) AFM data instead. Maintenance and update of the SCAP Specifications has been the responsibility of the IATA SCAP Task Force, meeting annually.

## 2.4 Provision of AFMs

2.4.1 Aircraft must be provided with a type of AFM, placards or a combination of AFM information and placards, as applicable, according to the relevant certification basis.

Note If placards have been used then they are a part of the type design and their removal, change, relocation, modification or repair must be approved under the applicable Part 21 regulations.

2.4.2 Aircraft certificated under older certification requirements or under some special categories may not be required to be provided with an AFM.

2.4.3 The following aircraft may not be required to have an AFM:

- a. aircraft up to a MTOW of 2,722 kg (6,000 lb) manufactured and flown prior to 1 March 1979
- b. historic and ex-military aircraft
- c. amateur-built aircraft
- d. experimental aircraft
- e. hang gliders operated under Civil Aviation Order (CAO) 95.8
- f. ultralight aircraft operated under CAO 95.10 and CAO 95.55
- g. gyroplanes operated under CAO 95.12 and CAO 95.12.1
- h. weight shift controlled aeroplanes and powered parachutes operated under CAO 95.32.

2.4.4 Gliders, powered sailplanes and manned free balloons (operated under CAO 101.54) are required to have an AFM if required by the applicable airworthiness standards.

2.4.5 Aircraft, other than those mentioned under paragraph 2.4.3 or Appendix A, are all required to have an AFM.

## 2.5 Regulation 21.005 – Manufacturers etc to provide AFMs for certain aircraft

2.5.1 Regulation 21.005 applies to aircraft whose certification basis does not require the provision of an AFM, and were not flown prior to 1 March 1979. For aircraft to which regulation 21.005 applies, the type certificate holder must provide an AFM to the owner of the aircraft, even when the type certification basis does not require the provision of such document.

## 2.6 Regulation 21.006 – Approval of AFMs

2.6.1 Regulation 21.006 provides for the approval of an AFM for the purposes of regulation 21.005. The regulation sets out who must be satisfied that the AFM complies with the applicable airworthiness standards.

Note Regulation 21.006 only has application in relation to regulation 21.005. AFMs required for type certification are approved by CASA or the relevant NAA as part of the type certification.

2.6.2 The holder of a type certificate for, or the manufacturer of, an aircraft may apply (in writing) for the approval of an AFM.

2.6.3 In order for the AFM to be approved, the applicant must satisfy CASA, the ADO or the authorised person (as applicable), that the manual would comply with the applicable

airworthiness standards. For type certificated aircraft, the applicable airworthiness standards are included in Parts 23, 25, 27 and 29 (and similar, as applicable).

## 2.7 Regulation 21.006A – Approval of changes to AFMs

- 2.7.1 Regulation 21.006A sets out who must be satisfied that a change to an AFM or AFM supplement complies with the applicable airworthiness standards.
- 2.7.2 If a design change (e.g. modification/repair design or STC) or compliance with the regulations necessitates a change to the AFM for the applicable aircraft, then the AFM change must be approved under this regulation.<sup>4</sup> This would include designs that change the crew/aircraft interface or the aircraft configuration (and are not already covered by the existing AFM).
- 2.7.3 The applicant for the design change, the applicant for complying with other specific regulations or the registered operator of the aircraft may apply for a change to the AFM.
- 2.7.4 In order for the change to be approved, the applicant must satisfy CASA, the ADO or the authorised person (as applicable), that the manual, as changed, would comply with the applicable airworthiness standards<sup>5</sup> or with the intended regulation, as applicable. For type certificated aircraft this should include 23.1581, 25.1581, 27.1581 or 29.1581 (or similar, as applicable).
- 2.7.5 The showing of compliance for a change to an AFM associated with a modification/repair design should be covered in the technical data approved under regulation 21.009 for the modification/repair design.
- 2.7.6 The showing of compliance for a change to an AFM generated by requirements of a specific regulation, including applicable operational regulations, should be covered in the technical data prepared in accordance with the requirements supporting the applicable regulation. For example, an engineering/technical report prepared in support of operations under regulation 235A of CAR should be prepared in accordance with CAAP 235A-1, the supporting document to regulation 235A.
- 2.7.7 The AFM amendment or supplement should be in the same format and structure as the existing AFM, and should clearly specify the design change or other approval to which the amendment or supplement relates. It is not necessary to exactly replicate every aspect of the AFM format, but the amendment or supplement should be as similar as practicable in order to facilitate its use.

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<sup>4</sup> See also subregulation 21.420(2) and AC 21-8.

<sup>5</sup> See regulations 21.403 and 21.405 and AC 21-8 for more information on applicable airworthiness standards.

- 2.7.8 If the aircraft does not have an AFM and a design change or the compliance with a specific regulation affects the information that would normally be contained in an AFM, then an AFM supplement may be approved under this regulation. However, if the information that would normally be provided in an AFM is provided by placards in the aircraft, and a design change necessitates a physical change to the placards, then that change should be approved as part of the design change.

#### Notes

1. An authorisation to approve a modification/repair design does not imply an authorisation to approve a change to an AFM. The authorisation to approve a change to an AFM under this regulation must be specifically granted by CASA, either under an ADO approval certificate or an instrument of appointment.
2. It is the responsibility of the holder of the modification/repair design approval to ensure that any subsequent required changes to the AFM (e.g. as a result of defects or changes to the design) are approved under this regulation and provided to the registered operator of the aircraft.<sup>6</sup>

### 2.7.9 Compatibility with the applicable TC or STC

- 2.7.9.1 An approved AFM supplement can only be used with an aircraft's AFM if its certification basis is compatible with that AFM. AFM supplements usually have a statement at the front of the document clarifying the applicability of the information included in the supplement. Such statements may include listing AFM part numbers, aircraft serial numbers, variants of the applicable aircraft model, year of manufacture, etc.
- 2.7.9.2 In some cases, aircraft of the same type and model may have different type certification bases requiring different AFMs. For example, an aircraft that has received both Civil Aviation Authority of the United Kingdom (UK CAA) and US Federal Aviation Administration (FAA) certification will have separate AFMs approved by each NAA. In this case, an FAA approved AFM supplement cannot be used directly with the AFM approved by the UK CAA as the two TCs will differ in some details from each other.
- 2.7.9.3 In other cases, aircraft of the same type and model and the same type certification basis may have different AFMs according to serial number and year of manufacture.
- 2.7.9.4 Each aircraft is manufactured in accordance with an approved TC and TCDS. For foreign aircraft type certificated by the NAA of a recognised country, these are referenced in the CASA type acceptance certificate (TAC). When the aircraft is modified and a new AFM supplement or AFM amendment is required, the applicable certification basis for the finding of compliance and approval of that supplement or amendment must be decided in accordance with Part 21 requirements and the TC/TCDS/TAC applicable to the manufactured aircraft, as recorded on its data plate.
- 2.7.9.5 The registered operator of an aircraft is responsible for ensuring that only compatible AFM supplements are used with a particular AFM.

### 2.7.10 Airworthiness statements related to aircraft configuration, operational capability and other limitations

- 2.7.10.1 Some design changes require the AFM or AFM supplement to include an airworthiness statement regarding the configuration, operational capability and / or limitations of the aircraft for certain operations. In such cases, it is the responsibility of the applicant for the design change to include all required airworthiness statements in the AFM

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<sup>6</sup> See regulation 21.460.

amendment or AFM supplement when applying for approval under regulation 21.006A. For specific information on airworthiness statements, the applicant should refer to the regulations and guidance material relevant to the design change.

**Note** For example, CAO 20.18 and 82.1 establishes the type of ADS-B transmitting equipment required for Australian registered aircraft and foreign registered aircraft, respectively, operating in Australian airspace. Building on this legislative basis, AC 21-45 contains the guidance material for the airworthiness approval of ADS-B aircraft equipment, including information on the airworthiness statement required to specify which accepted specification the equipment is compliant with.

2.7.10.2 Airworthiness statements in an AFM or AFM supplement are related to the configuration, operational capability and / or limitations of the aircraft and do not constitute as operational authorisations or approvals for the registered operator of the aircraft.

### **2.7.11 Minor design changes for which an AFM supplement is not required**

2.7.11.1 An AFM supplement for a design change is not required if ALL of the following conditions are met:

- a. Does not restrict, displace, or limit the use of required equipment.
- b. All new limitations can be addressed via placards.
- c. The aircraft performance is not negatively affected.
- d. Does not require a placard per TC or STC.
- e. VFR use only.
- f. Is non-required equipment.

## **2.8 Regulation 54 of CAR – Registered operators to maintain AFMs**

2.8.1 Regulation 54 of CAR requires the registered operator of an aircraft to ensure that the AFM is at all times appropriate for the aircraft, having regard to:

- a. any direction issued by CASA relating to the AFM under Subpart 11.G; and
- b. any modifications to the aircraft that would require amendment of the AFM (refer to section 2.7 for further details on approval of changes to an AFM); and
- c. any instructions in relation to the AFM from the holder of the TC, STC or modification/repair design approval that applies to the aircraft.

**Note** A copy of the AFM amendment record sheet is no longer required to be sent to CASA.

2.8.2 In some cases, an aircraft may be issued with an AFM that contains AFM supplements available for the aircraft type, which have not been incorporated or are not applicable for the specific aircraft. In such cases, it is the responsibility of the registered operator to clarify which supplement is and which one is not applicable to the specific aircraft. This can be achieved through several methods; however, it must be clear from the AFM document what method has been utilised for controlling non-applicable supplements (i.e. the amendment sheet must be properly annotated).

**Note** For example, acceptable methods to control non-applicable supplements include the complete removal of the non-applicable supplements or the separation of the non-applicable supplements from the rest of the AFM content.

2.8.3 The registered operator of an aircraft may nominate a representative for maintaining the AFM for that aircraft; however, the responsibility for the update status of the AFM remains with the registered operator of the aircraft.

## 2.9 Regulation 138 of CAR – Pilot to comply with requirements etc of aircraft's flight manual etc

- 2.9.1 Regulation 138 of CAR requires the pilot in command to comply with the requirements, instructions, procedures or limitations concerning the operation of the aircraft that are set out in the AFM.
- 2.9.2 If relevant information and instructions for the safe operation of the aircraft are issued on placards, or partly on placards and partly in another document, including an AFM, the pilot in command must comply with the requirements, instructions, procedures or limitations set out on the placards or in the other document, as applicable.

## 2.10 Regulation 139 of CAR – Documents to be carried in Australian aircraft – Carriage of the AFM

- 2.10.1 Regulation 139 of CAR sets out which documents must be carried in the aircraft when flying.
- 2.10.2 If an AFM has been issued for a particular aircraft, it must be carried on board the aircraft at all times, unless specified otherwise in the regulation (see paragraph 2.10.4 for further details).
- 2.10.3 If the performance information for the aircraft is provided by the manufacturer or TC/STC holder on electronic media (such as a CD or DVD) attached to the AFM book as an appendix, such electronic media may not be carried on board the aircraft providing that the performance data required for the safe operation of the aircraft is otherwise readily available on board. Any transition of data from one medium (electronic, hard copy, etc.) to another (electronic, hard copy, etc.) must be conducted in a controlled manner. The transition of data must not alter or have a potential to alter data that has been transitioned in any possible way.
- 2.10.4 If an aircraft is operated under an AOC, the AFM need not be carried in the aircraft, provided that an approved operations manual is carried that contains the information and instructions that are required, under the relevant airworthiness standards for the aircraft, to be included in the AFM. The operations manual must not contain anything that conflicts with the information and instructions in the AFM.

### 2.10.5 Carriage of the AFM in electronic form

- 2.10.5.1 Under the provisions of the *Electronic Transactions Act 1999*, any document required by the regulations that is in the form of paper is taken to meet the requirement if the document is available in electronic form. Accordingly, the AFM may be carried on board the aircraft in electronic form providing that its content remains readily available on board the aircraft and that it complies with all regulations concerning AFMs, including the maintenance of the AFM as per section 2.8.
- 2.10.5.2 If an aircraft is operated under an AOC and the electronic form of the AFM is carried on board the aircraft as part of a portable Electronic Flight Bag (EFB), the EFB must meet the requirements of a Class 1 or Class 2 EFB with functionality 1 or better.

Note Guidance on EFBs is available in CAAP 233-1(1) or later revisions.

## 2.11 AFMs for experimental aircraft

- 2.11.1 Experimental aircraft may not necessarily be required to have an AFM, but 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 Part 23, indicate the kind of information that should be presented in such a document.
- 2.11.2 As a minimum, the following information should be provided to the pilot:
- a. aircraft description
  - b. airspeed limitations
  - c. powerplant limitations
  - d. weight and balance and loading information
  - e. operations permitted
  - f. normal and emergency procedures
  - g. minimum field length for take-off and landing.

## 2.12 AFMs for light sport aircraft (LSA)

- 2.12.1 LSA must have aircraft operating instructions that comply with the applicable LSA standards. See AC 21-42 for more information on LSA standards.

## 2.13 AFMs for recreational aircraft

- 2.13.1 Recreational aircraft must have aircraft operating instructions that comply with the standards of the applicable registering self-administering organisation.

## 2.14 Further information

- 2.14.1 Further information on AFMs and the related airworthiness standards is available in the following documents:
- a. FAA AC 23-15: Small Airplane Certification Compliance Program
  - b. FAA AC 25.1581-1: Airplane Flight Manual
  - c. FAA AC 27-1: Certification of Normal Category Rotorcraft
  - d. FAA AC 29-2: Certification of Transport Category Rotorcraft
  - e. FAA AC 60-6B: Airplane Flight Manuals (AFM), Approved Manual Materials, Markings, and Placards Airplanes
  - f. EASA CS-22 Book 2 AMC 22.1581: Flight manual
  - g. EASA CS-VLA Book 2 AMC VLA 1581: Specimen Flight Manual For A Very Light Aeroplane
  - h. EASA CS-23 Book 2 Section 3: Aeroplane flight manual and approved manual material
  - i. EASA CS-25 Book 2 AMC 25.1581: Aeroplane flight manual
  - j. EASA CS-31GB Book 2 AMC 31GB.81: Operating instructions
  - k. EASA CS-31HB Book 2 AMC 31HB.81: General.



## **Appendix A**

# **Aircraft NOT required to have an Aircraft Flight Manual (AFM)**

## A.1 Aircraft NOT required to have an AFM

A.1.1 For each following model of aircraft, the relevant NAA does not require an AFM to be provided, nor has the TC holder issued a document (such as a POH) containing information required to be provided to the pilot under the applicable airworthiness standards.

\* "Make" means the Manufacturer, TC holder (on TCDS) or best known brand name.

\*\* "Type" means the type as listed in the Australian Civil Aviation Register

\*\*\* If there is no TCDS, "Model" is as designated by the relevant NAA.

Make*	Type**	Model*** (as per TCDS)	Relevant NAA	TCDS Number	Serial Number Applicability and/or Remarks
American Champion (Bellanca, Champion, Aeronca)	7	7AC, S7AC, 7BCM, 7CCM, 7DC, S7DC, S7CCM, 7EC, S7EC, 7FC, 7GC, 7HC, 7GCA, 7JC, 7GCB, 7KC, 7GCBA, 7KCAB, 7ACA	US FAA	A-759	All
American Champion (Bellanca, Champion, Aeronca)	7	7ECA	US FAA	A-759	1 through 1294-79
American Champion (Bellanca, Champion, Aeronca)	7	7GCAA	US FAA	A-759	1 through 377-79
American Champion (Bellanca, Champion, Aeronca)	7	7GCBC	US FAA	A-759	1 through 1107-79, 1109-79, providing no retrofit with 7-1545 wings.
American Champion (Bellanca, Trytek, Aeronca)	11	11AC, S11AC, 11BC, S11BC	US FAA	A-761	All
Auster	III	III, IIIF	UK CAA	None	All [Note: Required placarded Limitations are on UK CAA CofA.]
Auster	IV	IV	UK CAA	None	All [Note as for Auster III]
Auster	V	V	UK CAA	None	All [Note as for Auster III]
Auster	J1	J1, J1B, J1N	UK CAA	None	All [Note as for Auster III]
Auster	J2	J2	UK CAA	None	All

Make*	Type**	Model*** (as per TCDS)	Relevant NAA	TCDS Number	Serial Number Applicability and/or Remarks
					[Note as for Auster III]
Auster	J4	J4	UK CAA	None	All [Note as for Auster III]
Auster	J5	J5, J5A, J5B	UK CAA	None	All [Note as for Auster III]
Auster	J8	J8	UK CAA	None	All [Note as for Auster III]
Ayres - (Rockwell)	S2R	S2R	US FAA	A4SW	All serial numbers up to 1380R, 1416R thru 2525R (Note: All required placarded limitations are in TCDS A4SW)
Boeing	75	A75L3, 75, A75, B75, E75, A75J1, A75L300, A75N1, B75N1, D75N1, IB75A, E75N1	US FAA	A-743	All
Beech	17	C17B, SC17B, C17L, SC17L	US FAA	ATC 602	67 and up manufactured prior to 9/30/39
Beech	17	D17A	US FAA	713	D17A-305 and up
Beech	17	D17R	US FAA	638	D17R-136 and up
Beech	17	D17S, SD17S	US FAA	A-649	136 and up
Beech	17	F17D, SF17D	US FAA	689	211 and up, except 219
Beech	17	G17S	US FAA	779	424, B-1 and up
Cessna	150	150, 150A, 150B, 150C, 150D, 150E, 150F, 150G, 150H, 150J, 150K, A150K, 150L, A150L	US FAA	3A19	All
Cessna	150	150M	US FAA	3A19	15075782 through 15077005 (1975 model)
Cessna	150	A150M	US FAA	3A19	15064970, A1500524 through A1500609 (1975 model)
Cessna	172	172, 172A, 172B, 172C, 172D, 172E, 172F, 172G, 172H, 172I, 172K, 172L	US FAA	3A12	All
Cessna	172	172M	US FAA	3A12	All serial numbers up to 17265684 (1973 through

Make*	Type**	Model*** (as per TCDS)	Relevant NAA	TCDS Number	Serial Number Applicability and/or Remarks
					1975 models)
Cessna	172	P172D	US FAA	3A17	All
Cessna	175	175, 175A, 175B, 175C	US FAA	3A17	All
Cessna	177	177, 177A	US FAA	A13CE	All
Cessna	177	177B	US FAA	A13CE	All serial numbers up to 17702313 (1970 through 1975 models)
Cessna	177	177RG	US FAA	A20CE	All serial numbers up to 177RG0787 (1971 through 1975 models)
Cessna	180	180C, 180D, 180E, 180F, 180G, 180H	US FAA	5A6	All (Note: Models 180, 180A, 180B, need FAA approved AFM)
Cessna	180	180J	US FAA	5A6	18052285 through 18052620 (1973 through 1975 models)
Cessna	182	182, 182A, 182B, 182C, 182D, 182E, 182F, 182G, 182H, 182J, 182K, 182L, 182M, 182N	US FAA	3A13	All
Cessna	182	182P	US FAA	3A13	18260826 through 18264295 (1972 through 1975 models)
Cessna	185	185, 185A, 185B, 185C, 185D, 185E, A185E	US FAA	3A24	All
Cessna	185	A185F	US FAA	3A24	18502091 through 18502838 (1973 through 1975 models)
Cessna	188	188, A188, 188A, A188A, 188B	US FAA	A9CE	All
Cessna	188	A188B	US FAA	A9CE	188800833 through 18802348 & 18800967T through 18802348T (1972 through 1975 models)
Cessna	205	210-5 (205), 210-5A (205A)	US FAA	3A21	All

Make*	Type**	Model*** (as per TCDS)	Relevant NAA	TCDS Number	Serial Number Applicability and/or Remarks
Cessna	206	206, P206, P206A, P206B, P206C, P206D, P206E, U206, U206A, U206B, U206C, U206D, U206E, TP206A, TP206B, TP206C, TP206D, TP206E, TU206A, TU206B, TU206C, TU206D, TU206E	US FAA	A4CE	All
Cessna	206	U206F, TU206F	US FAA	A4CE	U20601701 through U20603020 (1972 through 1975 models)
Cessna	207	207, T207	US FAA	A16CE	20700001 through 20700314 (1969 through 1975 models)
Cessna	210	210, 210A, 210B, 210C, 210D, 210E, 210F, T210F, 210G, T210G, 210H, T210H, 210J, T210J, 210K, T210K	US FAA	3A21	All
Cessna	210	210L, T210L	US FAA	3A21	21059503 through 21061039 (1972 through 1975 models)
Cessna	305	305C, 305D, 305F	US FAA	5A5	All
Cessna	310	310, 310B, 310C, 310D, 310F, 310G, 310H, 310J, 310K, 310L, 310N, 310P, T310P, 310Q, T310Q	US FAA	3A10	All
Cessna	310	310R, T310R	US FAA	3A10	310R0001 through 310R0330 (1975 models)
Cessna	320	320, 320B, 320C, 320D, 320E, 320F	US FAA	3A25	All
Cessna	336	336	US FAA	A2CE	All
Cessna	337	337, 337A, 337B, M337B, T337B, 337C, T337C, 337D, T337D, 337E, T337E, 337F, T337F	US FAA	A6CE	All
Cessna	337	337G	US FAA	A6CE	33701463 through 33701671 (1973 through

Make*	Type**	Model*** (as per TCDS)	Relevant NAA	TCDS Number	Serial Number Applicability and/or Remarks
					1975 models)
Cessna	337	T337G	US FAA	A6CE	677, P3370001 through P3370225, except P3370196 (1973 through 1975 models)
Cessna	340	340	US FAA	3A25	All
DeHavilland	DH60	All DH60 Models	UK CAA	None	All [Note: Required placarded Limitations are on UK CAA Permit to Fly or UK CAA CofA.]
DeHavilland	DH82	DH82, DH82A	UK CAA	None	All [Note: Required placarded Limitations are on UK CAA CofA.]
DeHavilland	DH83	DH83	UK CAA	None	All [Note as for DH82]
DeHavilland	DH84	DH84, DH84A	UK CAA	None	All [Note as for DH82]
DeHavilland	DH85	DH85	UK CAA	None	All [Note as for DH82]
DeHavilland	DH87	DH87A, DH87B	UK CAA	None	All [Note as for DH82]
DeHavilland	DH89	DH89A	UK CAA	None	All [Note as for DH82]
DeHavilland	DH94	DH94	UK CAA	None	All
DeHavilland	DH94	DH94	CASA Aust	None	All
DeHavilland Australia	DHA-3	DHA-3 Mk 2	CASA Aust	CTA 5-3	All. No AFM Required. Note: Relevant information for operators can be obtained from Section 2 of the DHA-3 Mk 2 Maintenance & Repair Manual dated February 1952 (Revision AL 1), the previously issued Civil Mk 2 manual supplied by CASA and current placarded limitations.

Make*	Type**	Model*** (as per TCDS)	Relevant NAA	TCDS Number	Serial Number Applicability and/or Remarks
Fairchild	24	24R9, 24R9S, 24R40. 24R40S, 24R-46, 24R- 46S, 24R-46A	US FAA	None	All
Fairchild	24	24W-9, 24W-9S, 24W- 40, 24W-40S, 24W-41, 24W-41S, 24W-41A, 24W-41AS, 24W-46, 24W-46S.	US FAA	None	All
SWIFT (Globe, TEMCO)	GC-1A	GC-1A	US FAA	A-766	All
SWIFT (Globe, TEMCO)	GC-1B	GC-1B	US FAA	A-766	All
Grumman American	AA-1	AA-1, AA-1A, AA-1B	US FAA	A11EA	All
Grumman American (Traveler)	AA-5	AA-5	US FAA	A16EA	All
Grumman American (Cheetah)	AA-5	AA-5A	US FAA	A16EA	AA5A-0001 through AA5A-0282 (1976 models)
Grumman American (Tiger)	AA-5	AA-5B	US FAA	A16EA	AA5B-0001 through AA5B-0399 (1975 through 1976 models)
Grumman American	G164	G164, G164A	US FAA	1A16	All
Grumman American	G164	G-164B	US FAA	1A16	All serial numbers up to S/N 548B.
Grumman American	G164	G-164C	US FAA	1A16	All serial numbers up to S/N 42C.
Luscome	8	8, 8A, 8B, 8C, 8D, 8E, 8F	US FAA	A-694	All
Morane	880	880B	DGAC (France) originally, overtaken by EASA. US FAA validated	7A14 (US FAA)	All
Piper	J3	J3	US FAA	ATC 660	All
Piper	J3	J3C-40, J3C-50, J3C- 50S, J3C-65, J3C-65S	US FAA	A-691	All

Make*	Type**	Model*** (as per TCDS)	Relevant NAA	TCDS Number	Serial Number Applicability and/or Remarks
Piper	PA11	PA-11, PA-11S	US FAA	A-691	All
Piper	J3	J3F-50, J3F-50S, J3F-60, J3F-60S, J3F-65, J3F-65S	US FAA	A-692	All
Piper	J3	J3L, J3L-S, J3L-65, J3L-65S	US FAA	A-698	All
Piper	PA25	PA25	US FAA	2A10	25-03 through 25-731 (Restricted Category only)
Piper	PA25	PA25-235	US FAA	2A10	25-2000 through 25-5521, 25-7305522 through 25-8156024 (Restricted Category only)
Piper	PA25	PA25-260	US FAA	2A10	25-4415 through 25-5521, 25-7305522 through 25-8156024 (Restricted Category only)
Reims (current TC holder: Cessna)	FRA 150	FRA 150L	DGAC (France) originally, current - US FAA	A13EU (US FAA)	All
Ryan	STM	ST-M2	US FAA	None	All
Sud Aviation Gardan	GY80	GY-80-150, GY-80-160, GY-80-180	DGAC (France) originally, overtaken by EASA	Fiche No. 79, A12IN (US FAA)	All
Sud Aviation Gardan	GY80	GY-80-150D, GY-80-160D	DGAC (France) originally, overtaken by EASA	Fiche No. 79	All
Stinson (Consolidated Vultee)	L-5	L-5, L-5B, L-5C, L-5D, L-5E, L-5E-1, L-5G	US FAA	A-764	All
Stinson (Consolidated Vultee)	SR-9	SR-9E	US FAA	ATC 625	All
Stinson (Consolidated	SR-8	SR-8C	US FAA	ATC 608	All



Make*	Type**	Model*** (as per TCDS)	Relevant NAA	TCDS Number	Serial Number Applicability and/or Remarks
Vultee)					
Taylor	J-2	J-2	US FAA	None	All
Taylorcraft	BC12	BC 12-D	US FAA	A-696	All
Taylorcraft	DCO-65	DCO-65	US FAA	A-746	All
Waco	EGC-8	EGC-8 SPECIAL	US FAA	665	All
Waco	YKS-6	YKS-6	US FAA	A-533	All