



Civil Aviation Advisory Publication March 2020

Guide to the preparation of Operations Manuals

This Civil Aviation Advisory Publication (CAAP) provides guidance, interpretation and explanation on complying with the *Civil Aviation Regulations 1988* (CAR) or a Civil Aviation Order (CAO).

This CAAP provides advisory information to the aviation industry in support of a particular CAR or CAO. Ordinarily, the CAAP will provide additional 'how to' information not found in the source CAR, or elsewhere.

A CAAP is not intended to clarify the intent of a CAR, which must be clear from a reading of the regulation itself, nor may the CAAP contain mandatory requirements not contained in legislation.

Note: Read this advisory publication in conjunction with the appropriate regulations/orders.

This CAAP will be of interest to

- Current holders and applicants for an Air Operator's Certificate (AOC)
- Future Australian Air Transport AOC applicants
- Operations personnel of the AOC holder
- Operations Manual drafting service providers

Why this publication was written

This CAAP provides guidance on the preparation and contents of an Operations Manual for flight operations in line with the Standards and Recommended Practices (SARPs) in Annex 6, Parts I and III to the *Convention on International Civil Aviation* (the Chicago Convention), CASR and CAR.

The CAAP continues to evolve in readiness for implementation of Parts 119 and the operational parts of the *Civil Aviation Safety Regulations 1998* (CASR), which may assist industry in adapting their documents to suit the incoming regulations in a timely way.

Status of this CAAP

This is the fifth revision of this CAAP and supersedes CAAP 215-1(3.1) issued in June 2019. This revision includes minor editorial changes and amendments to Part B (1B2 fatigue management) for the new fatigue rules.

For further information

For advice on any matter in this CAAP, contact CASA Operations in your area by telephone on 131 757.

Contents

1.	Relevant regulations and other references	3
2.	Acronyms	3
3.	Definitions	5
4.	Introduction	5
5.	Creating an Operations Manual	5
6.	Volumes of an Operations Manual	6
7.	Format of the Operations Manual	7
8.	Document control	8
9.	Contents of Volume 1 – policy and procedures	9
10.	Contents of Volume 2 – aircraft operations	21
11.	Contents of Volume 3 – aerodromes and routes	50
12.	Contents of Volume 4 – training and checking organisation	53
13.	Annexes – Further information and examples	66
	Annex A – Policy and Procedures	A1
	Annex B – Aircraft Operations	B1
	Annex C – Aerodromes & Routes	C1
	Annex D – Training and Checking	D1
	Annex E – List of Headings	E1

1. Relevant regulations and other references

Current regulations and other references:

- Regulation 215 of CAR 1988 —Operations manual
- CAO 48.1 Instrument 2019 – Management of pilot fatigue
- CAO 82.0—Air operators' certificates – applications for certificates & general requirements
- CAO 82.1—Conditions on air operators' certificates authorising charter operations & aerial work operations
- CAO 82.3—Conditions on air operators' certificates authorising regular public transport operations in other than high capacity aircraft
- CAO 82.5—Conditions on air operators' certificates authorising regular public transport operations in high capacity aircraft
- CAO 82.7—Air operators' certificates authorising aerial work operations & charter operations in balloons
- Part 61 of CASR—Flight Crew Licensing
- Regulation 92.045 of CASR—Dangerous Goods Manual – Australian aircraft operators
- Regulation 92.050 of CASR—Dangerous Goods Manual – Foreign aircraft operators
- Regulation 92.055 of CASR—Dangerous Goods Manual- all operators
- Part 137 of CASR—Aerial Application Operations—other than rotorcraft
- Part 141 of CASR—Recreational, private and commercial pilot flight training other than certain integrated training
- Part 142 of CASR—Integrated and multi-crew pilot flight training and contracted recurrent training and checking
- Annex 6, *Operation of Aircraft, Part I, International Commercial Air Transport – Aeroplanes* to the Chicago Convention
- Annex 6, *Operation of Aircraft, Part III, International Operation - Helicopters* to the Chicago Convention
- The Australian Aeronautical Information Publication (AIP)

Future Civil Aviation Safety Regulations and Civil Aviation Orders:

- Part 119 of CASR—Australian air transport operators – certification and management
- Part 121 of CASR—Australian air transport operations – larger aeroplanes
- Part 133 of CASR—Australian air transport operations – rotorcraft
- Part 135 of CASR—Australian air transport operations – smaller aeroplanes
- Part 138 of CASR—Aerial work operations

2. Acronyms

AAP	Aerial Application
AIP	Aeronautical Information Publication
AOC	Air Operator's Certificate
AOCH	Air Operator's Certificate Handbook
ASEA	Approved Single Engine Aeroplane

ATC	Air Traffic Control
ATSR	Aviation Transport Security Regulations 2005
AWK	Aerial Work Operations
CFI	Chief Flying Instructor
CAAP	Civil Aviation Advisory Publication
CAO	Civil Aviation Orders
CAR	<i>Civil Aviation Regulations 1988</i>
CASR	<i>Civil Aviation Safety Regulations 1998</i>
CASA	Civil Aviation Safety Authority
DG	Dangerous Goods
EFB	Electronic Flight Bag
FDAP	Flight Data Analysis Program
FDP	Flight Duty Period
FMS	Flight Management System
FRMS	Fatigue Risk Management System
FTO	Flying Training Organisation
HAAMC	Head of Aircraft Airworthiness and Maintenance Control
Heli	Helicopter
HF & NTS	Human Factors and Non-Technical Skills
HLS	Helicopter Landing Sites
HOO	Head of Operations (under CASR)
IAL	Instrument Approach and Landing
ICAO	International Civil Aviation Organization
LSALT	Lowest Safe Altitude
MOS	Manual of Standards
MPL	Multi-crew Pilot (Aeroplane) Licence
NVD	Night Vision Device
NVG	Night Vision Goggles
NOTAM	Notice to Airmen
PED	Personal Electronic Device
PF	Pilot Flying
PM	Pilot Monitoring (also known as Pilot Not Flying)
RFF(S)	Rescue and Fire Fighting (Services)
RPT	Regular Public Transport
RPT (H)	Regular Public Transport (Heavy Aircraft)
RPT (O)	Regular Public Transport (Other than Heavy Aircraft)
TSI	Transport Safety Investigations

3. Definitions

CHICAGO CONVENTION – The Convention on International Civil Aviation.

HEAVY AIRCRAFT – high capacity aircraft with a maximum seating capacity exceeding 38 seats or a maximum payload exceeding 4,200 kg.

4. Introduction

4.1 This document is intended to provide guidance for operators to prepare an Operations Manual in line with the relevant SARPs in Annex 6, Operation of Aircraft Parts I and III to the Chicago Convention and CASA regulatory requirements.

4.2 Under Regulation 215 of CAR, an operator (of commercial operations) must create and provide an Operations Manual for use by, and guidance of, the operations personnel of the operator. The Operations Manual must contain all necessary information, procedures and instructions to ensure the safe conduct of aircraft operations.

4.3 However, Operations Manuals normally contain a greater range of information than is required by the International Civil Aviation Organization (ICAO) and CASA, and operators should use their own judgment as to how much extra information to include in the manual. Additional headings should be included as required, but **subjects not relevant to company operations need not addressed and may be marked ‘Reserved’ or ‘Not applicable’**.

4.4 The proposed Part 119 of CASR will require an operator to provide an exposition¹ that includes an Operations Manual setting out procedures for personnel to follow to comply with the regulations.

4.5 These guidelines, therefore, include requirements under existing legislation (i.e. CAR, CAO and CASR), but also contain some requirements from Part 119 of CASR that are currently optional, to assist operators to create or update their manuals in preparation for the implementation of the new CASR parts. These **future requirements are clearly marked in the text with an asterisk (*)**. Although these provisions are optional, the guidance in this CAAP will assist operators to meet current requirements and help to prepare for future changes².

4.6 CASA has made every effort to make these guidelines as comprehensive as possible. Nonetheless, operators must satisfy themselves that all their operations are conducted in accordance with the relevant acts, regulations, orders, and other secondary aviation legislation and comply with the procedures and limits set out in the AIP.

5. Creating an Operations Manual

5.1 When creating an Operations Manual, operators are required to think about how an operation will be carried out safely and describe the procedures for personnel to follow. In short, it is the ‘how to do it’ book. Company personnel will then use the information and procedures contained within the Operations Manual to comply with the appropriate legislation. It follows, then, that the Operations Manual must be made available to all operations personnel as required under CAR 215 (9) and (10).

5.2 The same information or procedures should not have to be repeated in different sections of the manual. Internal references should suffice, as they should with large amounts of

¹ The set of original or amended documents approved by CASA under the proposed Part 119 of CASR in relation to the operator.

² There will be a substantial transition period (3 or 4 years) for the operational CASR Parts once made, so current operators will have plenty of time to write new operations manuals.

material in other publications (e.g. instrument approach plates). Any items from the subject lists inserted in a different section of the manual should be referenced in the suggested section.

5.3 Companies that have more than one AOC/Certificate may re-use relevant common parts of their Operations Manuals. Each Operations Manual must be complete within itself and contain procedures that cover the gamut of operations carried out under the particular authorisation. It would not be acceptable for company personnel to have to refer to other Operations Manuals to get the required information.

5.4 The essential philosophy should be to set-out procedures that enable operational staff to comply with the legislative requirements applicable to the company's operations without them having to consult the legislative material itself. Given this, it is a requirement that each operator keep an up-to-date, accessible reference library of all the publications referred to in the manual. Operators may choose to include the information from other publications, but simple reproduction or reference to *legislative* material is not acceptable. In this respect the operator must consider how best to develop information, procedures and instructions to include in the Operations Manual. A number of useful examples are set-out in the annexes to this CAAP and in ICAO's *Preparation of an Operations Manual* publication.

6. Volumes of an Operations Manual

6.1 The Operations Manual may be a single volume or be composed of a suite of volumes. Depending on the size and complexity of an operation, an operator may combine volumes or create additional volumes. The emphasis here should be on the useability of the manual by the operator's personnel in different parts of the operation.

6.2 The actual contents of the volumes will vary from operator to operator, depending on the nature of the operations conducted. A representative breakdown of the contents of each volume, in ICAO terminology, is provided in Table 1 below.

Table 1 - Example volume structure for an Operations Manual based on ICAO volumes

Vol.	ICAO Volume	Alternative Title Examples
1	Policy and Administration Manual	Policy and Procedures
2	Aircraft Operating Manual	Specific Aircraft Type Procedures Flight Crew Operating Manual (FCOM)
3	Minimum Equipment List (MEL) & Configuration Deviation List (CDL)	None
4	Training Manual	Training and Checking Manual
5	Aircraft performance Manual	Aircraft Performance Flight Manual
6	Route Guide	Aerodrome and Route Guide
7	Emergency Evacuation Procedures Manual	Air Crew Emergency/Emergency Procedures
9	Dangerous Goods Manual	Dangerous Goods
9	Accident Procedures Manual	Accident and Incident Procedures
10	Security Manual ³	Security

³ Although ICAO provide guidance on the security section of an Operations Manual, Australian aviation security requirements are specified in the ATSR for some operations. This CAAP does not provide detail on security requirements specified in the ATSR.

Vol.	ICAO Volume	Alternative Title Examples
11	Human Factors & Non-Technical Skills Manual	Crew Resource Management Ground Operations Manual

6.3 This CAAP proposes development of an Operations Manual that consolidates the eleven ICAO volumes into a four-volume structure. The relevant volumes and constituent parts are shown in Table 2 below. **This structure is recommended only. Operators are free to structure their manuals how they see fit for their particular operation.** The essential requirement, however, is that the manuals address all aspects of a company's operations.

Table 2 – Consolidated volume structure for an Operations Manual

Vol.	Title	Includes
1	Policy and Procedures	<ul style="list-style-type: none"> • General company information • Dangerous goods • Safety Management • Fatigue Management • Accident and incident procedures • Operational specifications
2	Aircraft Operations	<ul style="list-style-type: none"> • Minimum Equipment List (MEL) & Configuration Deviation List (CDL) • Aircraft performance • Emergency evacuation procedures • International operations
3	Aerodromes and Routes	<ul style="list-style-type: none"> • Aviation rescue and fire-fighting service – paragraph 4.1.5 of Annex 6, Operation of Aircraft to the Chicago Convention.
4	Training and Checking	<ul style="list-style-type: none"> • Human factors and non-technical skills • Threat and error management • Flying training organisations

6.4 Where operations are to be conducted in accordance with subsidiary documents, such as an Aircraft Flight Manual or Pilot's Operating Handbook, these must be referenced in the Operations Manual and an explicit procedure included to ensure that the subsidiary documents are kept up-to-date.

7. Format of the Operations Manual

7.1 In selecting the format of the Operations Manual the primary criteria is that the manual should be easily useable and understood. The volume size should make the manual easy to handle in the aircraft, at least for those volumes that are required to be carried on the aircraft.

7.2 The quality of paper and printing reproduction of text and diagrams should be readable under all operating conditions. The manuals should be also in a format which is easily amendable. Electronic versions of the Operations Manual are acceptable, provided they meet all the requirements of this CAAP.

7.3 In selecting the volumes that make up the Operations Manual 'suite' the aim, if possible, should be to make each volume complete in itself. For example, different aircraft types should be in separate sub-volumes.

7.4 A description of the volumes that constitute the complete Operations Manual suite should be included in Volume 1 - Policy and Procedures (however titled).

7.5 The Operations Manual should also have a master contents list, preferably in Volume 1. In addition, each volume should have its own contents page. There should be a table of contents at the beginning of each volume and for each section or chapter. Appendices and additional headings and procedures should be included as required in suitable locations within the manual, keeping in mind the need for usability and readability. Very large manuals should include an index.

8. Document control

8.1 Each volume of the manual should have a checklist of pages identifying page numbers and dates of issue to ensure validity of the contents. Each amendment/revision and/or additional page should be recorded on a page specially provided in each volume for that purpose and signed for by the person making the amendment. All such amendments or revisions shall be issued to all personnel that are required to use this manual. To ensure adequate control, each volume of the Operations Manual should be numbered individually.

8.2 The operator's executive responsible for control of the contents of the Operations Manual should also be responsible for the issue of volumes to operations personnel and for dispatching amendments as needed. This task may be delegated to another person or business unit that reports to the responsible manager.

8.3 Records of the distribution of Operations Manual volumes to aircraft libraries, operational offices and individual personnel must be kept.

8.4 Amendments, revisions and additions to the Operations Manual should be approved by the executive responsible for the Operations Manual or applicable volume. In some cases this will involve ensuring changes issued by the originator of the particular volume are correct and appropriate to the Operations Manual. For example:

8.5 When changes are made by the aircraft manufacturer for the aircraft operating manuals that would affect the company aircraft operations.

8.6 When amendments issued by a contractor providing aircraft performance data would affect the aircraft performance, aircraft operations and perhaps the policy and procedures set out in Volume 1.

8.7 The operator should develop a process or system that manages all document changes to volumes of the Operations Manual and any consequential effects it may have on other volumes of the Operations Manual. That is, if the Policy and Procedures volume is changed it may also require changes to the Aircraft Operations volume or the Aerodrome and Route Guide.

8.8 In most cases amendments to the Operations Manual will be issued through normal processes. In the case of urgent changes to information contained in the Operations Manual it will be necessary to issue information using another notice system to personnel. This notice should be replaced by an amendment to the manual as soon as possible.

8.9 Amendments to the Operations Manual should be produced as new or replacement pages. Handwritten amendments to manuals are not normally acceptable.

8.10 Amendments to the Operations Manual should be easily identifiable, through use of a vertical amendment line or similar marking (for example, highlighting the text).

8.11 Amendments to the Operations Manual should be accompanied by a cover letter identifying the reason for changes. This is particularly important when changes are made to any safety-related information.

8.12 A revision to the list of effective pages must be included with any amendments.

8.13 The operator should establish a process that allows users of the volumes of the Operations Manual to provide feedback on its contents, particularly in respect of safety-related information. Refer to Annex A to this CAAP for an example of a document control system.

9. Contents of Volume 1 – policy and procedures

9.1 This and the following sections (10 to 12) set out a structure for company Operations Manuals. Operators need not adhere to this structure exactly, but should ensure that all headings applicable to their operation are addressed somewhere in the manual. Additional headings should be included as required.

9.2 In each section that follows, a list of the suggested headings is followed by an explanation of the sort of information to include and/or relevant references to regulations and other documentation. Some explanations point to additional information in an appendix to this document.

PART A - GENERAL

1A1 Preliminary

- 1A1.1 Manual and volume title
- 1A1.2 List of volumes and contents of complete Operations Manual
- 1A1.3 List of amendments and revision history
- 1A1.4 AOC holder name, address, ABN (if any) and contact details⁴
- 1A1.5 Operations headquarters, bases and facilities
- 1A1.6 Organisational structure*
- 1A1.7 Key position profiles*
- 1A1.8 Corporate structure*
- 1A1.9 Summary of operations*
- 1A1.10 Definitions

Explanation of Headings

- 1A1.1 The format should be [COMPANY NAME] Operations Manual – Volume 1 – Policy and Procedures. Where the entire Operations Manual is a single volume, leave out the volume number. (This information should be printed on the cover and on the title page for each volume and in the header or footer of each page.)
- 1A1.2 Include in each separate volume a complete list of all Operations Manual volumes and their contents.

⁴Headings marked with an asterisk (*) are future requirements under the proposed CASR Part 119 and others, and are optional until the new standards are implemented. They are included here to help operators future-proof their Operations Manuals.

- 1A1.3 A manual that is no longer relevant because it fails to take account of changing circumstances will lose credibility. Subregulation 215 (5) of CAR 1988 requires an operator to revise its manual from time to time. Subregulation 215 (8) requires that amendments be properly incorporated in the manual and all holders of the manual to receive such amendments. In order to maintain the integrity of the manual and to cope with amendments made from time to time, the manual should contain a list of effective pages and amendment pages which indicate that they are amendments, together with the date and number of the amendment (see further information in Annex A to this CAAP).
- 1A1.4 Include the AOC holder's name, address, ABN (if any) and contact details as applicable.
- 1A1.5 CAR 213, relevant parts of CAO 82.1.2, 82.3.2, 82.5.2, 82.7.5 and their related appendices contain the requirements for adequate facilities and equipment to ensure the safety of operations.
- 1A1.6 Include a pictorial representation of the organisational structure showing position titles and accountabilities. The references above (1A1.5) are relevant along with CAR 213, CASR 137.060 [Aerial Application (AaP)]⁵.
- 1A1.7 Provide the names, responsibilities, accountabilities and proxies for each key position in the organisation (see CAR 213). The key positions are:
- Chief Executive Officer;
 - Head of Flying Operations (Chief Pilot, Chief Flying Instructor (CAO 82.0.5, CAO 82.1.2, 82.3.2, 2A and 3.2, 82.5.2, 2A and 3.2 and 82.7.5 and 6);
 - Head of Training and Checking (CAO 82.1 Appendix 2.2, 82.3 Appendix 2.2 and 82.5 Appendix 2.1 and 2);
 - Safety Manager (CAO 82.3.2A, 82.5.2A); and
 - Head of Aircraft Airworthiness and Maintenance Control*.
- Other key positions should be included if applicable (e.g. Head of Ground Operations, Deputy Chief Pilot) where significant managerial functions are performed by separate personnel. The person responsible in the short or long-term absence of a key position holder should also be listed. These requirements are outlined in the proposed CASR Subpart 119.F*.
- 1A1.8 This is the legal structure of the organisation, including ownership interests and company office holders. This information is required in the operator's exposition under the proposed Part 119*.
- 1A1.9 Provide details of all operations being, or planned to be, conducted including the areas of operation, routes to be operated and bases to be used. Refer to the proposed Part 119*.

⁵ Aerial application operators may use a standard Operations Manual available from the Aerial Agricultural Association of Australia along with a schedule of differences in accordance with Subpart 137.C of CASR 1998 or produce their own manual in accordance with the guidance in this CAAP and the relevant regulations in Part 137 of CASR 1998.

1A1.10 Provide definitions for important terms in the Operations Manual to ensure clarity of meaning; for example, words like 'shall', 'will', 'should', 'note', 'caution' etc.

1A2 Resources

1A2.1 Required training, qualifications and experience of other operational personnel

1A2.2 Registered aircraft details

1A2.3 Procedures in the event of a loss of qualifications or recency, or disposal of registered aircraft (CASR 91.5025).

Explanation of Headings

1A2.1-2 For each route or operation to be conducted, provide a matrix of suitable aircraft and crew complement, qualifications and experience. An example of such a matrix is set out below (CAR 282).

Route/ Operation	Aircraft	Crew	Crew Quals Min.	Crew Total Hours	Crew Type Hours	Crew Recency	Crew Type Recency	Crew Route/ op Recency	Crew Other Training
YSCB - YPPH	VH-AAA B737-400	PIC Co-Pilot Cabin(3)	ATPL ATPL/ MP(A)L MECIR	1500 300	300 100	90 days	45 days	180 days	CRM EDTO Proficiency CAO20.11
YMLT – YKII	VH-BBB C208	PIC Co-Pilot	ATPL CPL NVFR	1500 300	200 50	90 days	90 days	180 days	Ditching survival <2 years
Heli- winching	VH-CCC B412	PIC Winch operator	CPL(H) -	400 50	50	45 days	45 days	1 year	Winching operations
Etc.									

Notes:

Pilot route qualifications, minimum experience, recency and other requirements can be found in:

- CAR 5.109, 5.110, 5.169, 5.170, 5.171, 174C, 176, 207, 211⁶
- CAR 218 (for RPT)
- CAR 219 (Charter)
- CAO 40.0.2A, 40.1.0.6, 7, 8, 8A, 40.3.0 (class, type and design feature endorsements)
- CAO 40.1.5 (ATPL)
- CAO 40.2.1.14, 40.2.2 (NVFR)
- CAO 82.0.10 (EDTO)
- CAO 82.1.4 (Charter/AWK)
- CAO 82.3.8, 9
- CAO 82.5.9 [RPT(H)]

⁶ As of 1 September 2014, Part 61 of CASR replaces CAR flight crew licensing regulations. Existing licence holders will transition to the new regulations over a four-year period while existing training organisations have three years to comply. New entrants must comply with Part 61.

- CAO 95.7.3 (Heli)
- [CASR Subpart 61.E, 61.I-K (Licences), 61.L-S (Endorsements and ratings), 61.T (Instructors), 61.U (Examiners), 61.V-Y (Engineers)], Division 61.A.2), 137.235 and 137.260 (AAp)

Training and checking requirements can be found in:

- CAO 82.1.3 (Charter/AWK)
- CAO 82.3 [RPT(O)]
- CAO 82.5 [RPT(H)]
- CAO 82.1.6 (Charter/AWK).

Aircraft requirements

- CAO 82.1.5, 82.3.10 (Foreign registered aircraft)
- CAO 82.3.6, 82.5.6

1A2.3 Detail procedures and restrictions in the event of a loss of qualifications or lack of recency for any operational staff member.

1A3 Operations Manual Administration

1A3.1 Requirement for all personnel to comply with the Operations Manual.

1A3.2 Record of endorsements by operational personnel that they have read and understood the manual.

1A3.3 Operations Manual distribution and availability.

1A3.4 Operations Manual review and amendment procedures.

1A3.5 CASA Exemptions.

Explanation of Headings

1A3.1 Include a statement of the requirement for all operational personnel to comply with the Operations Manual [CAR 215 (9), proposed CASR subpart 119.H*].

1A3.2 Include a sheet in the manual for operational personnel to record that they have read and understood the manual and subsequent amendments (see example at Annex A to this CAAP).

1A3.3 Maintain a record of to whom each copy of the Operations Manual is issued, and the location and availability of each copy in central areas for consultation by all personnel. Initial issue and receipt of amendments should be acknowledged by signature of the recipient.

See references:

- CAR 215 (6) and (7)
- CAO 82.1 Appendix 1.2.2
- CAO 82.3 Appendix 1.2.3
- CAO 82.5 Appendix 1.2.3

- CAO 82.7 Appendix 1.2.2
 - CASR 119.230*
 - CASR 137.055 (2) (AAp)
 - Subsection 28BH (4) of the *Civil Aviation Act 1988* (the Act).
- 1A3.4 Detail the Operations Manual review and amendment procedures. Note that different people may be responsible for different sections of the manual (e.g. Dangerous Goods). References include:
- CAR 215 (8)
 - CASR 119.215(s), 137.080 and 137.090 (AAp)
 - Subsection 28BH (4) of the Act
 - Annex A to this CAAP.
- 1A3.5 Include any CASA exemptions from Operations Manual requirements; for example, under CASR 137.055 (AAp), and the process for applying to CASA for an exemption to the regulations (CASR 11.175).

1A4 Record keeping - Operational

1A4.1 Control

1A4.2 Records

- Aircraft
- Flight plans
- Navigation, trip and fuel logs
- Load sheets, manifests and Dangerous Goods documents
- Flight crew
- Aircraft flight manual amendments
- Training and checking

1A4.3 Uncontrolled handbooks

1A4.4 Retention Periods

1A4.5 AOC Holder's Safety Questionnaire

Explanation of Headings

1A4.1 Provide details of how records are managed within the organisation, including how new records are created and updated, how records are tracked within the organisation, security arrangements and who has access to which records, back-up protection procedures for both electronic and paper records, schedules for the destruction of out-dated records (see below for regulatory record retention requirements) and referencing systems. Also include requirements for the surrender or production of documents and licences in accordance with CAR 301 and 302.

1A4.2 Details of required records can be found under the following references:

- Aircraft – CASR 42.C.3 and 42.N
- Flight preparation forms – CAR 233(3)

- Navigation, trip and fuel logs – CAR Part 7
- Flight Crew Training – CAO 82.1 Appendix 1.2.4, CAO 82.3 Appendix 1.2.5, CAO 82.5 Appendix 1.2.4, CAO 82.7 Appendix 1.2.5
- Load sheets, manifests – CAO 20.16.1 Dangerous Goods (See Aoch)
- Flight Crew – medical, flight time, recency and currency and route qualifications – CAR Part 5 (CASR 61.1230, 141.180, 141.285, Subpart 141.J, 142.255, 142.360, Subpart 142.L), CAR 216, 218 (RPT) and 219 (Charter), CAO 40.3.0 (Heli), CAO 82.0.3E (MPL) CAO 82.1 Appendix 1.2.3, 82.3 Appendix 1.2.5, 82.5 Appendix 1.2.4 and 82.7 Appendix 1.2.4), Paragraph 14.6 of Civil Aviation Order 48.1 Instrument 2019
- AFM amendments – CAR 54, 322, 323 (See Annex A).

Note: *Details of required training records, which can be found in Appendix 1 to CAO 82.1 and 82.7 and Appendix 2 to CAO 82.3 and 82.5, should be included in the Training and Checking volume of the Operations Manual.*

1A4.3 This refers to documents over which the operator has little or no editorial control, including such publications as pilot operating handbooks and aircraft flight manuals, where these are approved by the operator for use in operations. A process should be recorded here explaining how these documents are managed to ensure their currency and availability to relevant operational staff. See:

- CAR 54, 138 and 139
- CASR Part 21
- CAO 101
- CAAP 54-1(2).

1A4.4 Record retention periods:

- CAO 82.1 Appendix 1-2.3
- CAO 82.3 Appendix 1-2.5 (a)
- CAO 82.7 Appendix 1-2.5
- Paragraph 14.7 of Civil Aviation Order 48.1 Instrument 2019
- CASR 119.355 and 119.360*

Other references include:

- Aeroplane Flight Review Certificate – CAR 5.108, 5.169(1), (4), (CASR 61.400, 61.1220)
- Proficiency Check Record – CAR 217
- Standardisation & Proficiency Instructor Record – CAO 40.1.7.9.10
- Night Visual Flight Rules (NVFR) Recency Requirements – CAO 40.2.2 Appendix 5
- Instrument Flight Rules (IFR) Recency Requirements – CAO 40.2.1.11
- Personal Log Books – under CAR must be retained by pilot as long as flight crew licence is held (CASR 61.355).

1A4.5 Enter the procedures with respect to CASA's AOC Holder's Safety Questionnaire (CAO 82.1.7, 82.3.11, 82.7.7)

PART B – OPERATIONAL PERSONNEL**1B1 Duties and Responsibilities**

- 1B1.1 Pilots-in-Command
- 1B1.2 Co-pilots
- 1B1.3 Check Pilots
- 1B1.4 Senior Base pilots
- 1B1.5 Flight Examiners
- 1B1.6 Flight Instructors
- 1B1.7 Cabin Crew
- 1B1.8 Aircrewman (e.g. winch operator, bombardier etc.)
- 1B1.9 Flight Training Managers (if different from Head of Training)
- 1B1.10 Flight Dispatchers/Load Controllers/Ground Support Staff
- 1B1.11 Ground Instructors
- 1B1.12 Engineering/Maintenance staff

Explanation of Headings

1B1.1-10 Detail the regulatory requirements and company duties of the listed operational personnel, and any other positions, where applicable. For emergency and safety critical functions, include a general description here and the specific requirements under the relevant referenced headings later in the Operations Manual.

Some specific references for regulatory requirements include:

- Pilot-in-Command: CAR 133, 224, 233, 309, 309A, CAO 20.11.10 to 14 and 82.3 Appendix 4.1
- Co-pilot: CAO 82.3 Appendix 4.2 (MPL)
- Senior Base Pilot: CAO 82.0 Appendix 1.3
- Cabin Crew: CAO 20.11.10 to 14 and Appendix 4
- Load Controller: CAO 20.16.1
- Engineering/Maintenance staff: CAR 5.37, CASR 42.705 and 42.710.

1B2 Fatigue Management

- 1B2.1 Fatigue Management Policy
- 1B2.2 Flight time limitations and fatigue management
- 1B2.3 Conditions and processes for extensions
- 1B2.4 Fatigue Risk Management System (FRMS)

Explanation of Headings

- 1B2.1 Policy statement in respect of fatigue management.
- 1B2.2 Limiting the duration of FDPs and flight time within an FDP is a key aspect of the management of fatigue. CAO 48.1 has FDP limits in all appendices. The limitations specified in the appendices to CAO 48.1 may need to be modified by an operator in

order to mitigate fatigue risks to an acceptable level. The operations manual needs to include procedures (a roster system) and documented limits. Operators should consider their own circumstances using prior company experience or discussions with other operators and groups to develop company procedures to ensure flight crew are rostered and work in accordance with the limits and requirements arising from compliance with each applicable Appendix of CAO 48.1. Additional guidance is provided within CAAP 48-01.

- 1B2.3 There are limitations on extensions. The operations manual needs to include procedures for the application and management of extensions. Additional guidance is provided within CAAP 48-01.
- 1B2.4 An operator's FRMS approved under Appendix 7 of CAO 48.1 is required to form part of an operator's operations manual. See Appendix 7 of CAO 48.1 and *ICAO FRMS Implementation Guide for Operators* for guidance on the development and implementation of an FRMS.

1B3 Medical

- 1B3.1 General
- 1B3.2 Medical certificates
- 1B3.3 Medical equipment to be carried on aircraft*
- 1B3.4 Health requirements for international flights
- 1B3.5 Drug and alcohol prohibitions
- 1B3.6 Drug and alcohol management plans (DAMP):
- Contact Officer
 - Supervisor.
- 1B3.7 Incapacitation
- 1B3.8 Medical clearance for sick passengers and medical equipment
- 1B3.9 Cosmic radiation exposure

Explanation of Headings

- 1B3.1 General health guidance for air crew is at Annex A to this CAAP.
- 1B3.2 Provide guidance as to the required medical certificates (or certificates of validation) for company operations and to ensure that flight crew can continue to comply with the requirements and privileges of CAR 5.04 or CASR 61.410, 415 and Subpart 67.D
- 1B3.3 Include any medical equipment required to be carried on each flight. Emergency Medical Services operators may want to put this information in an appendix to this section. Note that future Air Transport CASR (Parts 133, 135 and 121) will mandate the carriage of certain medical equipment.
- 1B3.4 Health requirements for international flights can be found in *AIP-GEN Entry, Transit and Departure of Passengers and Flight Crew*.
- 1B3.5 Prohibitions on alcohol and drug affected operational staff are in CAR 256.
- 1B3.6 Include or reference the company DAMP (CASR Part 99), highlighting the rights and obligations of management and operational staff. Identify the company DAMP Contact Officer and Supervisor. Detailed information on DAMPs can be found at: www.casa.gov.au/aod.

- 1B3.7 Detail the company policy and requirements for temporary incapacitation of operational staff under CAR 115 (see further information in Appendix 8A of Annex A to this CAAP).
- 1B3.8 Detail any procedures and requirements for carrying sick passengers and associated medical equipment.⁷
- 1B3.9 Include requirements to monitor and record flight crew exposure to cosmic radiation.⁸

Note 1: *Requirements for supplemental and emergency oxygen should be detailed under heading 2B4.1 in Volume 2*

Note 2: *Procedures for dealing with the in-flight incapacitation of crew should be included under heading 2B4.9 in Volume 2.*

⁷ See 2B3.6 for requirements for the carriage of passengers with special needs.

⁸ See Sections 4.2.11 and 6.12 of Part 1 and Appendix 2.1.32 of Annex 6, *International Commercial Air Transport – Aeroplanes*, to the Chicago Convention. Also see the requirements of 2C3.6 in Volume 2 of this CAAP.

PART C – SAFETY MANAGEMENT SYSTEMS AND EMERGENCY RESPONSE AND REPORTING PROCEDURES

1C1 SAFETY MANAGEMENT

1C1.1 Safety Management System (SMS)*

1C1.2 Flight Data Analysis Program (FDAP)

Explanation of Headings

1C1.1 Operators should include or reference the company Safety Management System as required under CAO 82.3.2A and 83.5.2A, highlighting the key procedures for operational staff.

1C1.2 For operators required to have an SMS, the FDAP forms part of that system. For other operators required to maintain a Flight Data Analysis Program (those operating aeroplanes with a Maximum Take-off Weight (MTOW) greater than 27 000 kg or Helicopters greater than 7000 kg), include a description of the program, and the limitations on use and disclosure of data and identification of persons who report data to the program (see Annex A to this CAAP). CAAP SMS-4-1(0) provides guidance on FDAPs.

Note 1: *All Air Transport Operations under CASR Part 119 will require an SMS. CASA recommends that current charter operators who are not required to have an SMS at present consider the benefits of adopting one in advance of the implementation of Part 119.*

Note 2: *Guidance material for developing an SMS is contained in the CAAP SMS Package [CAAP SMS-1(0), CAAP SMS-2(0) and CAAP SMS-3(0)].*

1C2 Emergency Response and Reporting Procedures

1C2.1 Accident reporting and processes

1C2.2 Incident reporting and processes

1C2.3 Accident and incident investigations

Explanation of Headings

1C2.1 Include company processes in the event of an accident, along with regulatory requirements covering reportable matters, reporting times, responsible persons, nominated officials, written reports and the preservation of accident sites and flight data (FDR) and Cockpit Voice Recorder (CVR) information [see Part IIIA of the Act, CAO 82.5.12, *Transport Safety Investigations (TSI) Act 2003* Section 48 and Part 6, *TSI Regulations 2003* Part 2 and 5.4].

1C2.2 As with accident reporting processes, above, but provide a list of Routine Reportable Matters (see the Act Part IIIA, *TSI Act 2003*, Section 48 and Part 6, *TSI Regulations 2003* Part 2 and 5.4).

1C2.3 Detail or reference the rights and obligations of staff during an accident or incident investigation and the powers of investigators (see the Act Part IIIA and TSI Act Parts 4, 5 and 6).

Note: *Mandatory accident and incident notification contact details and forms are available on the Australian Transport Safety Bureau's website at: www.atsb.gov.au*

PART D – DANGEROUS GOODS AND LIVE ANIMALS

1D1 Dangerous Goods

- 1D1.1 Policy
- 1D1.2 Procedures
- 1D1.3 Carriage of non-categorised dangerous goods
- 1D1.4 Carriage of live animals

Explanation of Headings

- 1D1.1 State the company's policy for the carriage of dangerous goods, including compliance with the Technical Instructions (CASR Part 92). This may be all, some or none of the items listed in the latest edition of the ICAO publication: *Technical Instructions for the Safe Transport of Dangerous Goods by Air*. Include the relevant requirements under CAR 304.
- 1D1.2 Set out or append the procedures and instructions, including a dangerous goods emergency response plan, for the handling and carriage of dangerous goods on the company's aircraft. Alternatively, specify where the procedures and instructions can be found (see CASR Part 92, CAO 20.16.1.6 and ACs 92-01, 92-02 and 92-03. Also see Annex 6 and Annex 18, *The Safe Transport of Dangerous Goods by Air*, to the Chicago Convention).
- 1D1.3 Detail the company procedures and regulatory requirements to carry or consign dangerous goods on board an aircraft where such carriage is not normally and automatically allowed under Part 92 of the Civil Aviation Safety Regulations 1998 or the ICAO Technical Instructions, as detailed in Advisory Circulars (AC) 92-04 and 92-05.

Note: *Together these policies and procedures form the Dangerous Goods Manual, for which detailed guidance can be found in the 92-series of ACs: 92A-1(0), 92-1(1), 92-2(0), 92-3(0), 92-4(0), and 92-5(0).*

- 1D1.4 Set out the company policy and procedures for the carriage of live animals on board company aircraft (see CAR 256A). For the transportation of live animals, consult the International Air Transport Association's (IATA) *Live Animals Regulations* manual (International Operations).

Note: *Advisory Circular 92-2, Dangerous Goods Manuals, contains detailed information on the requirements for information with respect to dangerous goods and should be consulted before addressing this issue in the operations manual.*

PART E – OPERATIONAL SPECIFICATIONS

1E1 Operational Specifications

1E1.1 CASA-issued operational specifications.

Explanation of Headings

1E1.1 This section should contain any CASA-issued operational specifications in accordance with CAO 82.0.4

10. Contents of Volume 2 – aircraft operations

10.1 This section of the Operations Manual should contain the essential information needed for planning, preparing and carrying out company operations. As with Volume 1, above, this section provides an acceptable structure for company Operations Manuals, but not the only one, and operators should ensure that their manuals contain all the essential information required by operational staff to carry out operations safely.

PART A – GENERAL⁹

2A0 Preliminary

- 2A0.1 Volume title
- 2A0.2 List of volumes and contents
- 2A0.3 List of amendments and revision history
- 2A0.4 Definitions and abbreviations
- 2A0.5 Unit conversion charts

Explanation of Headings

- 2A0.1 Volume title, preceded by manual title if a separate volume.
- 2A0.2 Include a complete list of the Operations Manual volumes and the contents of each if they are separate volumes.
- 2A0.3 List amendments and revision history of the volume, unless a complete list for the entire manual is in Volume 1.
- 2A0.4 Include definitions and abbreviations relevant to this volume only.
- 2A0.5 Include any imperial/metric or other unit conversion charts.

2A1 Flight Authorisation and Prohibitions

- 2A1.1 Flight authorisation and Operational Control
- 2A1.2 Charter substitution for RPT
- 2A1.3 Documents to be carried on flights
- 2A1.4 Aircraft Flight Manual (AFM)
- 2A1.5 Minimum flight and cabin crew
- 2A1.6 Rostering in accordance with flight and duty time policy
- 2A1.7 Authority and responsibilities of pilot-in-command
- 2A1.8 Carriage of Cabin Attendants
- 2A1.9 Prohibited and conditional activities
- 2A1.10 Carriage of passengers in seats at which dual controls are fitted
- 2A1.11 Carriage of goods in cockpit and passenger compartments
- 2A1.12 Carriage of persons in custody
- 2A1.13 Starting and ground running of engines
- 2A1.14 Persons approved to taxi aircraft
- 2A1.15 Persons permitted to operate flight controls
- 2A1.16 Intoxicated and/or offensive passengers

⁹ As with other sections, headings marked with an asterisk (*) are future requirements under draft CASR Parts 119 and others and are optional until the new standards are implemented. They are included here to help operators future-proof their Operations Manuals.

- 2A1.17 Entry to flight deck/cockpit
- 2A1.18 Carriage and discharge of firearms
- 2A1.19 Use of other AOC holder's resources
- 2A1.20 Carriage of Examiners/CASA inspectors

Explanation of Headings

- 2A1.1 Detail the procedures and requirements for authorised flight of the company's aircraft and supervision of operations for both domestic and international operations. The designation of a pilot in command for each flight (CAR 224) and emergency authority to deviate from relevant procedures and regulations should also be noted (CAR 145).

Operational Control is the exercise of authority over the initiation, continuation, diversion and termination of flight and is the sole prerogative of the aircraft pilot-in-command. It imposes responsibility on him for ensuring that flight operations are conducted in accordance with all rules, regulations, orders and conditions prescribed or specified for the flight or service including those contained in this manual. The pilot-in-command shall have the final and ultimate authority over the initiation, continuation, diversion and termination of a flight and for the determination of the acceptability or otherwise of any aspect of the meteorological conditions relating to the flight.

- 2A1.2 Detail the conditions and procedures to be followed in the event of an intention or need to substitute a charter flight for an RPT one (see CAO 82.0.3C, CAR 206).

- 2A1.3 Relevant references include:

- CAR 139, 232 and 233.1(h);
- CAO 20.16.1.5.4;
- CASR 137.120 (AAp); and
- *AIP-GEN National Regulations and Requirements; Entry, Transit and Departure of Passengers and Crew, AOC To Be Carried On Board; and AIP-ENR Carriage of Flight Documentation.*

Any special procedures relating to electronic versions of approved documents (CAR 232A and 233) should also be included. Further requirements for electronic documentation are set-out in CAO 82.0 subsection 11 and Appendix 9; in CAO 82.3 and 82.5, paragraphs 10.9 and 10.10 and in CAAP 233-1.

- 2A1.4 Note the requirement to operate company aircraft in accordance with the up-to-date Aircraft Flight Manual (AFM) or other equivalent document (e.g. the company Operations Manual Vol. 2A). (See CAR 54, 138 and 139).

- 2A1.5 Either include the minimum number of flight crew for each of the company's aircraft here or separately in Sub-volume 2A – Specific Aircraft Operating Procedures. Cabin crew requirements are in CAO 20.16.3.6.

- 2A1.6 Include a note that flight crew rosters are to be in accordance with the operator's flight and duty time policy as declared in Section 1B2.

- 2A1.7 Relevant references include:

- The Act, Section 24, CAR 78, 138(4), 145, 174, 176, 176A, 224, 225, 232, 239, 245, 309, 309A; and
- AIP-GEN AIREP; AIP-ENR Pilot Responsibilities; Aerodrome Lighting.

- 2A1.8 Detail the company policy relating to cabin attendants, including the duties and responsibilities of the flight crew concerning the briefing and control of passengers in normal and emergency operations in accordance with CAO 20.16.3.6 and 7 [also see CAO 20.11.13 and 20.16.3.6A (balloons and airships)].
- 2A1.9 This relates to company and regulatory requirements regarding the following prohibited and conditional activities:
- Simulated Instrument Flight (CAR 153);
 - Training flights (CAR 249);
 - Asymmetric engine simulation (CAO 82.0);
 - Proving flights (CAR 222, The Act Sections 27AD and 28 [also see the Air Operator's Certificate Handbook (AOCH) Volume 2.11 for triggers and procedures]; and
 - Test flights (CAR 249 and 262AS).
- 2A1.10 Provide the conditions under which a passenger can occupy a control seat (see CAR 226 and CAO 20.16.3.11).
- 2A1.11 Provide the policy for the carriage of goods in the cockpit and passenger compartments of the company's aircraft [see CASR 90.405 (3), CAO 20.16.2 and 20.16.3.11].
- 2A1.12 Safety-related considerations with respect to the carriage of persons in custody may be included here.
- 2A1.13 See CAR 225, 230 and 231 and CAO 20.9.5 for details on starting and ground running of engines.
- 2A1.14-15 List the requirements and conditions for approved company personnel to taxi aircraft and/or manipulate flight controls in flight (see CAR 228 and 229).
- 2A1.16 The company policy in respect of intoxicated and/or offensive passengers should be detailed in accordance with CAR 256.1 and 256AA. Powers of pilots-in-command are at CAR 309 and 309A.
- 2A1.17 Detail the company's policy for the entry to the flight deck by persons other than flight crew assigned to the flight (see CAR 227, 262, ATSR 4.66, 4.67E).
- 2A1.18 Include any requirements for the carriage and use of firearms on company aircraft (CAR 143, 144).
- 2A1.19 Include the conditions under which resources of another AOC holder can be utilised.
- 2A1.20 CASA has the power to assess the continued competence of an AOC holder by inspection and monitoring of:
- Infrastructure
 - Manuals
 - Training
 - Crew records
 - Maintenance
 - Equipment
 - Pre-flight preparation

- Flight/dispatch procedures
- Flight operations
- Ground operations
- Dangerous Goods processes
- Safety and quality systems

Any time such an inspection is conducted on the premises of the company, a competent member of the relevant department inspected should accompany the inspector.

For flight inspections, the operator shall ensure that any person authorised by CASA is permitted at any time to board and fly in any aircraft operated in accordance with an AOC issued by CASA and to enter and remain on the flight deck.

The pilot-in-command shall, within a reasonable time of being requested to do so by a person authorised by CASA, produce to that person the documentation required to be carried on board.

However, at any time, the pilot-in-command may refuse access to the flight deck if, in his opinion, the safety of the aircraft would thereby be endangered (CAR 262).

PART B - STANDARD OPERATING PROCEDURES

2B1 Flight Planning and Preparation

2B1.1 Planning and briefing materials:

- Operational flight plan requirements
- Flight plan terminology and format decoder
- Authorised weather forecasts/reports
- Flight category
- Airspace classification and tracking restrictions

2B1.2 Planning systems

2B1.3 Notice to Airmen (NOTAM)

2B1.4 Route and aerodrome briefing

2B1.5 Planning altitudes and flight levels

2B1.6 Restricted and prohibited areas

2B1.7 Minimum Safe Altitudes/Lowest Safe Altitude (LSALT)

2B1.8 Aircraft Performance Limitations:

- Holding and Instrument Approach and Landing (IAL)
- Maximum angle of bank
- Maximum rate of descent

2B1.9 Point of No Return/Alternate (PNR/A) and Critical/Equi-Time Point Calculations

2B1.10 Extended Diversion Time Operations (EDTO)

2B1.11 ASEA operations

2B1.12 Suitable aerodromes/Helicopter Landing Sites (HLS)

2B1.13 Rescue and Fire Fighting (RFF) requirements

2B1.14 Alternate aerodromes/HLS

2B1.15 Airspace classification requirements

2B1.16 Flights over water

2B1.17 Bird/animal avoidance procedures

Explanation of Headings

- 2B1.1 Detail how and where flight crew get their pre-flight briefing and company procedures for creating and lodging operational flight plans.

Provide a flight planning terminology and format decoder to enable accurate and standardised interpretation and understanding of the content of the flight plan

All IFR and RNP flights require flight notification to Air Traffic Services (ATS). RPT and charter flights conducted under the Visual Flight Rules (VFR) may use a company flight note system, but must submit flight details when nominating a SARTIME to ATS (see CAR 241, CASR 91.850, AIP-ENR *Provision of Operational Information*).

When planning flights, except as provided for under CASR 137, for Aerial Application operations, operators and pilots must use and take account of meteorological conditions in authorised weather forecasts/reports (see CAR 120, 239, 240).

Also detail the company policy and regulatory requirements in relation to flight category [see CASR 137.095 (AAp), CAO 82.3.7, 82.5.7].

Specify, where applicable, any airspace classification and tracking restrictions relevant to company operations (see AIP-ENR *Descent and Entry; Classes of Airspace; AIP-GEN GNSS Flight Notification*).

- 2B1.2 Include the processes and limitations for using any company computer-based flight planning systems, including the use of electronic flight bags (EFBs) (see CAR 232A, CAO 82.0.11 and ICAO Document 9376-AN/914 9.8).
- 2B1.3 Provide information to pilots about how and where NOTAMs are made available or obtained. An explanation of the Airservices NOTAM service can be found in AIP-GEN 3.1 and 2.
- 2B1.4 Detail the route and aerodrome information the pilot-in-command must consult and take into account when planning a flight (see CAR 239; AIP-ENR *Flight Planning*; AIP-GEN *Meteorological Services*). Also see AIP-ERSA: *Uncertified or Unregistered Aerodromes Checklist*.
- 2B1.5 Specify acceptable planning cruising altitudes and flight levels (see CAR 180 and AIP-ENR *Cruising Levels*). Refer to the guidance in this CAAP under heading 2C3.6 for information to include on cosmic radiation exposure limits.
- Where operations will be conducted under Reduced Vertical Separation Minima (RVSM), include company procedures and requirements to ensure operations comply with RVSM regulations. CAR Part 12 Division 5 contains administrative regulations for RVSM.
- CAO 52.1 relates to the use of Class A airspace, with further guidance in CAAP 181A-(2). AIP-ENR *RVSM* describes the operational procedures relevant to RVSM operations.
- 2B1.6 Detail any company procedures for flight in or near prohibited and restricted areas (CAR 140; AIP-GEN *Restricted and Danger Areas*; AIP-ENR *Airspace Reservation – Prohibited, Restricted and Danger Areas* and *PRD Areas* provide operational requirements in relation to prohibited, restricted and danger areas.
- 2B1.7 Stipulate minimum altitudes for company operations (CAR 178 and AIP-ENR *Holding and IAL Procedures*, AIP-GEN *Air Route Details – Specifications and Chart Depictions*; *LSALT* refer.)
- 2B1.8 Specify general aircraft performance limitations in respect of holding and different types of instrument approaches (AIP-ENR *Holding and IAL Procedures* and maximum rate of descent, maximum angle of bank and speed restrictions if applicable (AIP-ENR *Handling Speeds*).
- 2B1.9 Specify operations and routes for which Point of No Return/Alternate and Critical/Equi-Time Point calculations are required.
- 2B1.10 Detail planning requirements for EDTO as required by CAO 82.0 Appendix 5 for heavy aeroplanes (also see Attachment D to ICAO Annex 6 Part I Ch. 4 and AIP-ENR – *Aircraft Deviations ETOPS Aircraft*).
- 2B1.11 Include the planning requirements for Approved Single Engine Aeroplane (ASEA) operations, particularly those relating to passenger carrying, aerodrome and route limitations and emergency procedures, in line with the approval issued by CASA in this respect under CAR 174B and 175A.

- 2B1.12 Provide instructions about suitable aerodromes and HLS for company operations for planning purposes. (CAR 239, CAO 82.0 Appendix 2, AIP-ENR *Suitability of Aerodromes, ERSA-FAC*)
- 2B1.13 Also provide information relating to the level of Rescue and Fire Fighting Services (RFFS) acceptable for company operations (See ICAO Annex 6, Part I, *International Commercial Air Transport – Aeroplanes*, Ch. 4; Annex 14, Vol. I, *Aerodrome Design and Operations*, Ch. 9; Annex 14, Vol. II, *Helicopters*, and ERSA-INTRO Section 31). Procedures for requesting or responding to RFFS are in AIP-GEN *Aerodrome Emergencies and Rescue and Fire Fighting Services*.

The Operations Manual must give guidance on the rescue and fire-fighting category appropriate to the aircraft operated and the operator's policy on operating into aerodromes with less than that category. ICAO Annex 6, Parts I and III (*International Operation – Helicopters*), states that in determining that adequate facilities exist for a flight, an operator needs to consider the adequacy of emergency facilities such as those for fire-fighting and search and rescue (including CAO 95.7.3.5).

The majority of operators establish policy on the minimum categories acceptable for each aircraft type. In deciding what category is acceptable, an operator might wish to give some guidance on the acceptability of lower categories in certain circumstances. Table 3 lists the relevant aerodrome category for different sized aircraft.

Table 3 - Aerodrome category for rescue and fire fighting

Aerodrome category	Aeroplane overall length (m)	Maximum fuselage width (m)
1	0 up to but not including 9	2
2	9 up to but not including 12	2
3	12 up to but not including 18	3
4	18 up to but not including 24	4
5	24 up to but not including 28	4
6	28 up to but not including 39	5
7	39 up to but not including 49	5
8	49 up to but not including 61	7
9	61 up to but not including 76	7
10	76 up to but not including 90	8

Note: To categorise the aeroplanes using the aerodrome, first evaluate their overall length and second, their fuselage width.

- 2B1.14 Include the regulatory and any company requirements for the mandatory nomination of alternate aerodromes. (CAR 239.2, CAO 82.0, Appendix 5). Other relevant information is in AIP-ENR *Alternate Aerodromes; Aeronautical Meteorological Minima/Weather; Instrument Landing System*; AIP-GEN *Designated International Airports; Landing at Other Than Designated International Airports* for international operations.)

Also list the requirements for emergency en-route alternates for normal and EDTO (CAO 82.0 Appendix 5.7 and 5.8). ICAO Annex 6, Part I, *International Commercial Air Transport – Aeroplanes*, Attachment D provides the following definitions for en-route alternates:

- An *adequate alternate aerodrome* is one at which the landing performance requirements can be met and which is expected to be available, if required, and which has the necessary facilities and services, such as air traffic control, lighting, communications, meteorological services, navigation aids, rescue and fire-fighting services and one suitable instrument approach procedure.
- A *suitable alternate aerodrome* is an adequate aerodrome where, for the anticipated time of use, weather reports, or forecasts, or any combination thereof, indicate that the weather conditions will be at or above the required aerodrome operating minima, and the runway surface condition reports indicate that a safe landing will be possible.

2B1.15 List regulatory and operational restrictions related to airspace classification for company operations (CAR 99A, CAO 52).

2B1.16 Provide the planning conditions for safe flight over water, including the distances from land aircraft can fly, flight notification requirements and carriage of survival equipment (CAR 253, 258, CAO 20.11.5 to 7, CAO 95.7.3, AIP-ENR *Flights Over Water*).

CAO 95.7.2 provides certain exemptions for helicopters involved in water rescue operations.

CASR 21.197 allows for special permits to be issued by CASA for particular types of over-water operations, including non-AOC operations.

2B1.17 Detail any bird or animal avoidance procedures for company operations, including checking with aerodrome operators, where applicable, about the presence of birds and animals on or in the vicinity of their aerodrome (also see reference in AIP-ENR *Bird Migration and Areas with Sensitive Fauna*).

2B2 Fuel Policy

2B2.1 Minimum Planning Requirements

2B2.2 Trip fuel

2B2.3 Alternate Fuel

2B2.4 Variable Fuel Reserve

2B2.5 Fixed Fuel Reserve

2B2.6 Holding Fuel

2B2.7 Additional Fuel

2B2.8 In-flight re-planning*

2B2.9 Fuel load weight and balance

2B2.10 Quantity measurement

2B2.11 Fuel type and quality checks

2B2.12 Fuel quantity cross-checks pre and in-flight

2B2.13 Fuel usage records

2B2.14 Fuelling Operations:

- Hot refuelling
- Refuelling with passengers on board
- Defuelling
- Drum stock
- Fuelling at overseas ports.

- 2B2.15 Location of aircraft during refuelling
- 2B2.16 Post-fuelling quantity cross-check
- 2B2.17 Water contamination
- 2B2.18 Fuel anti-freeze procedures
- 2B2.19 Ignition hazard management
- 2B2.20 Fuel spillage
- 2B2.21 Fuel jettison
- 2B2.22 Conditions for flight to remote islands
- 2B2.23 EDTO
- 2B2.24 Engine oil management

Explanation of Headings

- 2B2.1-23 Provide comprehensive procedures for the use and management of fuel, including computation of fuel quantities for specified contingencies. [Regulation 220 of CAR](#) requires that:

An operator shall include in the operator's Operations Manual specific instructions for the computation of the quantities of fuel to be carried on each route, having regard to all the circumstances of the operations, including the possibility of failure of an engine en route.

Note: *For in-flight re-planning, operators should include procedures with regards to in-flight requests for, or receipt of, weather reports or forecasts, or other destination or alternate aerodrome information which may affect the ability of the aircraft to land at the destination or alternate. In these situations, flight crews must re-plan the flight to a suitable aerodrome for the aircraft to land with reserves intact.*

General information and advice on implementing a fuel policy is published in [CAAP 234-1](#), but future CASR Operational Parts will have specific requirements for fuel management in Regulations and Manual of Standards. Further specific topic and general references are also set-out below:

- Alternate Fuel – AIP-ENR *Alternate Aerodromes*
- Holding Fuel – AIP-ENR *Fuel Requirements*
- Fuel quantity cross-checks CAO 20.2.6, CASR 137.150 (AAp)
- Fuel usage records – CAR 220 (also see Record Keeping (1A4))
- Fuelling Operations – CASR 137.115, CAO 20.9.4, 20.10.1 (AWK), 20.10.7.2 (b) (Heli)
- Fuel Jettison – AIP-ENR Fuel Dumping in Flight
- Conditions for flight to remote islands - CAO 82.0.3A
- EDTO - CAO 82.0 Appendix 5.6

The following references are generally applicable to an operator's fuel policy and aircraft fuelling requirements (also see examples at Annex B to this CAAP):

- CAR 138, 220, 233, 234, 239, 240 and CAR 244
- CAO 20.2, 20.9.3, 20.10, 20.10.1, 20.16.1, 82.0
- CAO 82.1 Appendix 1
- CAO 82.3 Appendix 1
- CAO 82.5 Appendix 1
- Aircraft Flight Manuals
- Pilots Operating Handbooks

2B2.24 Provide general instructions for the management of engine oil including minimum and maximum oil to be carried, consumption, required checks and replenishment procedures (CAO 20.9.3).

2B3 Ground Handling

2B3.1 Ground organisation – structure and responsibilities

2B3.2 Load Control

2B3.3 Standard passenger weights

2B3.4 Carriage of infants and children

2B3.5 Carriage of passengers with special needs

2B3.6 Carriage of live animals

2B3.7 Documentation:

- Cargo Manifests
- Passenger Lists
- Dangerous Goods documentation

2B3.8 Refusal to carry passengers or cargo

2B3.9 Policy for off-loading passengers and cargo

2B3.10 Movement airside/Passenger boarding

2B3.11 Aero-bridge procedures (Visual docking)

2B3.12 Engine start and ground operating procedures:

- Security of aircraft doors and hatches

2B3.13 Standard marshalling, towing and parking procedures

Explanation of Headings

2B3.1 Set-out the ground organisation structure, responsibilities and communications protocols.

2B3.2 General aircraft loading procedures to ensure the safe loading, unloading and flight of aircraft should be documented here. Where flight crew are charged with the responsibility for these functions, this should be explicitly stated here. The loading systems, including the procedures for cross-checking that the aircraft is correctly loaded in respect of take-off and landing weights and in-flight aircraft balance, should also be documented. (CAR 235, CAO 20.16.1, 20.16.2; CASR 137.195 and CAO 20.21.4, 6 (AAp) 82.3.5.3, 82.5.5, Appendix 1)

Note: *Specific aircraft loading requirements should be inserted in sub-volume 2A.*

Instructions regarding cargo stowage and restraint, relevant to the nature of the intended operations, must be provided where it is intended to carry cargo. 'Cargo' means things other than persons carried in an aircraft. Particular attention should be given to the carriage of cargo in compartments other than those specifically provided for that purpose. These instructions must require the compliance of restraint system/s and provide instructions for their use (see CAO 20.16.2).

2B3.3 CAAP 235-1 (1) *Standard passenger and baggage weights* provides information on this topic (also see Annex B to this CAAP and CAR 235).

- 2B3.4 Specific procedures for the carriage of infants and children should be in accordance with CAO 20.16.3.12 and 13.
- 2B3.5 Similarly, carriage of passengers with special needs should be in accordance with CAO 20.16.3.14.
- 2B3.6 Carriage of live animals – see 'Carriage of dangerous goods and live animals' at 1D1.4 in Volume 1 (CAR 256A (1) (b) for permissions).
- 2B3.7 Operators will need to provide a load sheet template as part of the load system that includes all the requirements of CAO 20.16.1.5.

Procedures for the completion and carriage of cargo manifests should be included here. (CAR 139, 304, AIP-GEN *Entry, Transit and Departure of Passengers and Crew*)

When passengers are carried on a charter or regular public transport flight, the operator or his representative shall compile a passenger list and leave it at the aerodrome of departure. The list shall contain the aircraft registration, the names of passengers carried, the date and estimated time of departure, and the places of embarkation and destination (see CAO 20.16.1.7).

- 2B3.8 Company policy and procedures for the refusal to carry passengers or cargo should be detailed here. Note that requirements for pilots who may refuse to allow an authorised person into the crew compartment should also be set out as in CAR 227.
- 2B3.9 For Air Transport operations (charter and RPT), an operator is required to provide policy and procedures in the Operations Manual for the pilot-in-command to off-load passengers or cargo when any performance limit would otherwise be exceeded. Procedures for off-loading fuel should be included under 2B2 'Fuel Policy' above.
- 2B3.10-11 Directions for staff and passenger movement airside and passenger boarding should be included here. (CAR 221, 294, CAO 20.9.5.3) Aero-bridge procedures are in AIP-AD *Visual Docking Guidance System* and the aerodrome manual, where applicable. (CASR 139.095)
- 2B3.12 Procedures should be in accordance with CAR 225 and 230, CAO 20.9.5 and 6 and AIP-ENR *Engine Start, Push-back and Taxi*. The security of aircraft doors and hatches must be confirmed prior to taxi (see CAR 244 and CAO 20.2.3).
- 2B3.13 Where applicable, standard marshalling procedures as set-out in CAO 20.3 should be included. Towing and parking of aircraft should be in accordance with CAR 196, 291, 292, CAO 20.3.3. Also see *The Act*, Section 24 and AIP-ENR *Security Awareness*.

Note: See Section 2B2, above, for fuelling procedures and precautions.

2B4 General Crew Procedures & Briefings

- 2B4.1 Cabin safety procedures:
 - Use of seats and seatbelts by crew and passengers
 - Passenger briefings and demonstrations
 - Smoking
 - Emergency Locator Transmitters
 - Emergency Oxygen
 - Stowage
 - Personal electronic devices (PEDs).
- 2B4.2 Use of checklists
- 2B4.3 Hand-over and take-over procedures
- 2B4.4 Standard Pilot Calls:
 - Take-off
 - Climb
 - Cruise
 - Visual Approaches
 - Instrument Approaches.
- 2B4.5 Augmented crew procedures
- 2B4.6 Sterile Cockpit
- 2B4.7 Crew meals during flight
- 2B4.8 Alcohol Responsibilities and Passenger Service
- 2B4.9 Crew incapacitation in flight

Explanation of Headings

- 2B4.1 Cabin safety procedures:
 - Provide requirements for the use of seats, seat belts and safety harnesses in accordance with CAR 251, CAO 20.16.3.3, 4, 5 and CASR 137.130, 225 (AAp). Precautions relating to the use and stowage of occupant restraints in occupied and unoccupied helicopter seats can be found in CASR 90.115.
 - Requirements and content for oral briefings for general and disabled passengers must be included here along with requirements for printed matter for each aircraft type. Some current rules and future Air Transport CASR Parts (121, 133 and 135) also require physical demonstrations of aspects of the briefing content [see CAR 253 (4) and CAO 20.11.14].
 - Include a statement of the company policy on smoking in flight, the creation of a fire hazard and notices in aircraft (see CAR 255 and 289 and CAO 20.16.3.8).
 - Detail the company policy and operations that must carry an Emergency Locator Transmitter (ELT) and/or an approved portable ELT (CAR 252).
 - It is a requirement under CAO 20.4 to include information relating to the following matters:
 - the procedures to be followed to check and operate the oxygen systems, including protective breathing equipment, in the aircraft to which the Operations Manual relates
 - the carriage, use and methods of administering oxygen to passengers, including first-aid oxygen (CAO 20.4.9)
 - the methods of determining, by observation of the equipment, that oxygen is being supplied to dispensing units
 - the variation of the duration of the oxygen supply with varying cabin pressure altitude and numbers of passengers

- the conditions of operation under which crew members must use oxygen
- the procedures for demonstrating the donning and use of oxygen masks by passengers in accordance with paragraphs 4.4 and 4.5 of CAO 20.4
- schematic diagrams of the oxygen systems installed in the aircraft to which the Operations Manual relates.
- Requirements for the stowage of loose articles should be detailed here (CAO 20.16.2.4, 20.16.3.9 and 10).
- Detail the company policy for the carriage and operation of Personal Electronic Devices (PEDs) during flight operations, including passenger briefing (see CAR fA and CAAP 233-1 for information on the differences between PEDs and EFBs).

2B4.2 State the company policy for the use of normal and emergency operations checklists under CAR 232 and, for aircraft with a MTOW greater than 5 700 kg, CAO 20.13.

2B4.3 Detail procedures for hand-over and take-over of aircraft control for multi-crew operations, including suitable phraseology (see examples at Annex B to this CAAP).

2B4.4 Include standard pilot calls for all phases of flight.

2B4.5 Set-out the company procedures for augmented crewing, including when and in what circumstances the captain may leave the flight deck; the instructions the captain must give to the relieving flight crew; to whom the PIC and 'pilot flying' responsibilities are delegated in the captain's absence and the situations in which the captain must be recalled to the flight deck.

Note: *The minimum type and general experience requirements, along with the recency requirements for flight during augmented crew operations may be included here or set-out in 1A2 above.*

2B4.6 State the company policy for the phases of flight that require a sterile cockpit.

2B4.7 For operations that include in-flight meals, state the company policy and any precautions that may be required.

2B4.8 Detail the company alcohol service policy and crew responsibilities.

2B4.9 State the procedures to be followed in the event of crew incapacitation during flight, including the succession of command in the event of incapacitation of the designated PIC (see example at Annex B to this CAAP).

2B5 Collision avoidance

2B5.1 SSR (Transponder) Procedures

2B5.2 Ground Proximity Warning System (GPWS) Systems

2B5.3 Night Vision Devices/Goggles (NVD/NVG)

2B5.4 Airborne Collision Avoidance System (ACAS/TCAS)

2B5.5 Automatic Dependent Surveillance Broadcast (ADS-B)

2B5.6 Aircraft Altitude Alerting System

2B5.7 Aircraft computers/Flight Management Systems (FMS)

2B5.8 Weather Radar

2B5.9 Maintenance of look-out and use of external lights

2B5.10 Bird/animal avoidance

Explanation of Headings

- 2B5.1 Aircraft fitted with serviceable secondary surveillance radar (SSR) should operate in accordance with the requirements in AIP-ENR *Operational Requirements for Transponders; Aircraft Transponders* and AIP-GEN *Secondary Surveillance Radar Transponders*. Medium and heavy balloons must comply with the requirements under CASR 101.185.
- 2B5.2 Provide the operational requirements for the use and serviceability of GPWS's in accordance with CAO 20.18.9 and the IFR restrictions under AIP-GEN *Ground Proximity Warning Systems*.
- 2B5.3 Operators intending to carry out operations using NVDs must do so in accordance with the regulations and include in the Operations Manual all the requirements in CAO 82.6 Appendix 2, clauses 3 and 4.
- 2B5.4 Include the requirements for operation of ACAS/TCAS as specified in CAR 262AD, AE, AF, AG, AIP-ENR *TCAS Selection* and AIP-GEN *Traffic Alert and Collision Avoidance System* and the pilot training and qualifications in CAO 40.0.5.
- 2B5.5 The circumstances for operation of ADSB equipment should be stated here (CAO 82.3 Appendix 6, 82.5 Appendix 4). Operational requirements are in AIP-ENR *Operational Requirements for ADS-B Transponder, ADS-B Emergency Codes*; and AIP-GEN *ADS-B Approval and Operations*.
- 2B5.6 Include procedures for operating the aircraft Altitude Alerting System. (CAO 20.18)
- 2B5.7 Detail general requirements for the operation of aircraft computer and Flight Management Systems with respect to collision avoidance, as required under CAR 232A, and CAO 20.18.9A, including a reference to and the location of the operating instructions for the computerised equipment.
- 2B5.8 Include procedures for the operation of weather radar in flight and on the ground (CAO 20.9.6 and AIP-GEN *Airborne Weather Radar*).
- 2B5.9 Include the requirements for pilots to maintain an adequate look-out and to display external lights in accordance with CAR 146, 195 and 196.
- 2B5.10 Specific local information relating to bird and other animal avoidance should be included in the aerodromes volume of the Operations Manual (also see Volume 1 *2B1.17*).

2B6 Navigation

- 2B6.1 Navigation policy
- 2B6.2 Altimetry – standard altitude and flight levels
- 2B6.3 Navigation tolerances and position fixing
- 2B6.4 Identification of navigation aids
- 2B6.5 Flight Management System databases and navigation criteria
- 2B6.6 Global Navigation Satellite System/Area Navigation (GNSS/RNAV)
- 2B6.7 Systems pre-flight checks
- 2B6.8 RVSM and operations in trans-oceanic airspace
- 2B6.9 Performance Based Navigation (PBN)
- 2B6.10 Navigation (journey) logs

Explanation of Headings

- 2B6.1 Some relevant navigation requirements are published in AIP-ENR *Navigation Requirements; Air Route Specifications* (also see CAR174D).
- 2B6.2 See AIP-ENR *Altimeter Setting Procedures*.
- 2B6.3 Navigation tolerances can be found in AIP-ENR *Navigation Requirements* subject to the requirements and limitations of CAR 179A.
- 2B6.4-5 See AIP-GEN *Radio Navigation Aids; Radio Navigation Service*.
- 2B6.6 The following references to GNSS/RNAV systems may be relevant: CAO 20.18.9A and 9B, AIP-GEN *Global Positioning System; Area Navigation (RNAV) Systems*; AIP-ENR *GPS Reporting Requirements and Procedures; Missed Approach Requirements – GPS/NPA; GPS Prediction Analysis; Use of GPS in Oceanic and Remote Areas*.
- 2B6.7 Insert the requirements for pre-flight cross-checking of on-board navigation systems, including required systems and serviceability for different kinds of operations (e.g. IFR).
- 2B6.8 Detail requirements for flight in RVSM under CAR 181U, T and S and pilot requirements under CAO 52.1. Also include any special conditions on non-RVSM trans-oceanic navigation (see CAR Part 12, Division 5, AIP-ENR *Reduced Vertical Separation Minima*; and AIP-GEN *RVSM Approval and Operations* and Examples in Annex B).
- 2B6.9 Provide the detailed procedures for operations in accordance with the company RNP/RNAV authorisations issued by CASA (see CASR 91.U, CAO 20.91, AIP-ENR *Required Navigation Performance* and examples in Annex B to this CAAP).
- 2B6.10 Include the company and regulatory requirements for the keeping and content of flight navigation logs (see CAR 78 to 80, and forthcoming CASR Parts* 119, 121, 133, 135).

2B7 Communications

- 2B7.1 Radio frequency switching procedures
- 2B7.2 Air traffic control clearances
- 2B7.3 Position Reporting/En route weather reports
- 2B7.4 Communications at non-controlled aerodromes
- 2B7.5 Pre-flight radio check/listening watch
- 2B7.6 Datalink

Explanation of Headings

- 2B7.1 Standard communication, and any special radio frequency switching, procedures should be included here or matched to specific routes and aerodromes in Volume 3 – *Routes and Aerodromes*, consistent with the procedures in AIP-ENR *General Rules and Procedures*.
- 2B7.2 Detail procedures for notifying Air Traffic Control (ATC) of a need or inability to comply with ATC clearances in accordance with CAR 100. Further information is in AIP-ENR *Air Traffic Clearances and Instructions; Clearances – Pilot Responsibility*.

- 2B7.3 Company position reporting requirements in line with CAR 158, CASR 101.210 (medium and heavy balloons), AIP-ENR *En Route* and AIP-GEN *Appendix 2 - Full Position Report* should be detailed here. The weather reporting requirements under CAR 247 can also be included here.
- 2B7.4 Procedures to ensure aircraft are operated in accordance with CAO 82.3.5A and 82.5.5A at non-controlled aerodromes should be specified. Further information is in AIP-ENR *Climb and Cruise Procedures; Class G Airspace*.
- 2B7.5 The check under CAR 242 and the listening watch under 243 are required.
- 2B7.6 Describe the use and management of non-voice data communications systems.

Note: *Non-regulatory company radio communications procedures can also be included here if desired.*

PART C – FLIGHT CONDUCT

2C1 Pre-departure procedures

- 2C1.1 Pre-flight actions:
 - Daily Inspection
- 2C1.2 Equipment for VFR Flight
 - VFR flight at night
- 2C1.3 Equipment for IFR Flight
- 2C1.4 Crew baggage
- 2C1.5 Exits & passageways
- 2C1.6 RVSM/RNP

Explanation of Headings

- 2C1.1 Operators should detail procedures to comply with the pre-flight safety precautions required by CAR 244, CAO 20.2, and 20.4.4; the administrative requirements under CAR 133, including the use of EFBs and their interaction with aircraft systems; and the daily inspection (CAR Schedule 5). AIP-GEN *Pre-flight Information Service*; and *Flight Information Service* have further information.
- 2C1.2 CAR 174A, 174B, CASR137.K (AAp) and CAO 20.18 including appendices 1, 2, 4 and 6, 8, 9(Heli), 10 (Balloons and Airships) are relevant. Note that aircraft used for VFR flights at night in conditions of no visual horizon or insufficient visual cues (ground lighting) should be equipped for instrument flight and flown by an IFR-qualified pilot.
- 2C1.3 CAR 177, 179A and CAO 20.18 including appendices 2, 3, 4, 5 and 7-9 (Heli) are relevant.
- 2C1.4 Include procedures here to ensure crew baggage is handled and stowed correctly¹⁰.
- 2C1.5 Directions relating to aircraft exits and passageways while in flight in accordance with CAR 254 and CAO 20.11.9 should be inserted here.
- 2C1.6 Detail any additional pre-flight actions for operations requiring RVSM or RNP.

2C2 Departure procedures

- 2C2.1 Push-back, tow and taxi:
 - Lighting
 - Avoiding collisions.
- 2C2.2 Take-off precautions:
 - Obstacle clearance
 - Tests before take-off run
 - Flight crew take-off emergency briefing.
- 2C2.3 Initial climb procedures:
 - Flap and gear retraction
 - Minimum altitude for turns.
- 2C2.4 Take-off Minima

¹⁰ See CAO 20.16.3.9 at www.casa.gov.au

2C2.5 Instrument and visual departures (Controlled Airspace)

2C2.6 Instrument and visual departures (Class G/Common Traffic Advisory Frequency)

Explanation of Headings

- 2C2.1 Specify the procedures for aircraft ground handling including push-back, tow and taxi, and include the requirements under CAR 196 and 246 for aircraft lighting and avoiding collisions while operating on the manoeuvring area of an aerodrome (also see AIP-ENR *Airways Clearances; Engine Start, Push-back and Taxi; Helicopter Operations at Aerodromes*).
- 2C2.2 Take-off precautions, including performance calculations for one-engine out obstacle clearance, the physical inspections under CAR 245, the cockpit checks under CAO 20.13, and the requirement and considerations for a take-off emergency briefing should be detailed here. A master copy of the checklist, both abbreviated and expanded, for each aircraft type operated by the operator must be included here or in a specific aircraft volume of the manual.
- 2C2.3 The general policy and procedures for the initial climb, relating to take-off flap and gear retraction, the minimum altitude for turns and autopilot usage should be set-out. Specific details should be in Volume 2A – Specific aircraft types.
- 2C2.4-6 Detailed company policy for instrument departures and take-off minima (CAR 257.3) that at least meet the regulatory requirements should be stated here. AIP-ENR *Operations in Controlled Airspace; Standard Instrument Departures; Aerodrome Meteorological Minima and Visual Meteorological Conditions – Take-off, En Route and Landing* have more information.

2C3 En route and Descent Procedures

- 2C3.1 Lowest Safe Altitude (LSALT)
- 2C3.2 Supplemental oxygen
- 2C3.3 Diversions due to weather
- 2C3.4 Descent procedures
- 2C3.5 Standard Terminal Arrival Routes/procedures
- 2C3.6 Cosmic radiation considerations and procedures

Explanation of Headings

- 2C3.1 Detail any exemptions from adherence to the LSALT requirements under CAR 178 and the acceptable method for calculating LSALT for routes without a published figure (also see AIP-GEN *Air Route Details, Specifications and Chart Depictions; Lowest Safe Altitude*).
- 2C3.2 Detail the procedures and requirements for use of supplemental oxygen in company operations as set out in CAO 20.4.4 to 8:
- the procedures to be followed in the operation of the oxygen systems in the aircraft to which the Operations Manual relates
 - the methods of administering oxygen to passengers
 - the methods of determining, by observation of the equipment, that oxygen is being supplied to dispensing units
 - the variation of the duration of the oxygen supply with varying cabin pressure altitude

- and numbers of passengers
- the conditions of operation under which crew members must use oxygen
- the procedures for demonstrating the donning and use of oxygen masks by passengers in accordance with paragraphs 4.4 and 4.5 of CAO 20.4
- schematic diagrams of the oxygen systems installed in the aircraft to which the Operations Manual relates.

2C3.3 State the conditions and procedures for the diversion of aircraft to an alternative aerodrome due to weather or other operational factors (see AIP-ENR *Diversion to an Alternate Aerodrome; Flight Notification Amendment; Weather Deviations – General (Oceanic)*).

2C3.4-5 Provide any specific company descent or arrival procedures in addition to regulatory requirements (e.g. standard rates of descent) AIP-ENR *Descent and Entry* has relevant information.

2C3.6 Provide details of maximum operating altitudes and durations as a function of latitude that are permissible for the ongoing safety of crew see CAO 82.0 Appendix 6.2 (d).

2C4 Approach and Landing Procedures

2C4.1 Pre-landing checks

2C4.2 Approach & Landing Precautions

- Stabilised Approach Criteria

2C4.3 Visual Approaches:

- Visual Approach Slope Indicators

2C4.4 Instrument Approach Procedures:

- Approach Ban

2C4.5 Missed and baulked approaches

2C4.6 Circuit and landing procedures

2C4.7 Final approach & threshold speeds

2C4.8 Low visibility (including Autoland) procedures

2C4.9 Post-flight actions

2C4.10 Noise Abatement/Restrictions

2C4.11 Enhanced, synthetic vision and head-up devices.

Explanation of Headings

2C4.1 State the company policy on the timing of aircraft pre-landing checks in line with the flight check system (CAO 20.13).

2C4.2 Provide general approach and landing precautions here, including performance, stabilised approach criteria, or specific criteria in Volume 2A for each different type of aircraft the company operates. (For further information, see AIP-ENR *Holding, Approach and Departure Procedures; Aircraft Speeds*.)

2C4.3 State the company policy and conditions for carrying out visual approaches to aerodromes (AIP-ENR *Visual Approach; Operations in Class G Airspace*) and use of visual approach slope indicators (AIP-AD *Visual Approach and Docking Guidance Systems*).

- 2C4.4 Specify the company procedures for carrying out instrument approaches, including any special night requirements, in accordance with the regulations (CAR 179). Also include procedures for operations to aerodromes without authorised IALs.

Relevant information on instrument approach procedures can be found in AIP-ENR *Holding, Approach and Departure Procedures*. Future Parts 121 and 135 of CASR will include approach ban requirements*. Information on approach bans can currently be found in subsection 4.1.1, Part II of Annex 6 to the Chicago Convention.

Specify any additional, specific helicopter company procedures for carrying out instrument approaches in accordance with the regulations, and the procedures for operations to HLS without authorised IAL approaches (CAR 179) (also see AIP-ENR *Holding, Approach and Departure Procedures*).

- 2C4.5 Specify the conditions, other than meteorological minima, for which a missed approach or baulked procedure should be carried out (CAO 20.7.1B.10-12, AIP-ENR *Go Around and Missed Approach Procedures in VMC; Missed Approach – Standard Procedures and Missed Approach Procedures*).

- 2C4.6 Set out the company policy and procedures relating to joining and flying in the circuit, airspeed and altitude limitations and operations with strong crosswinds. For general circuit procedures [see CAO 20.21.8 (Ag), CAAP 166-1 and AIP-ENR *Landing; Circuit Operations; Landing Manoeuvres*].

- 2C4.7 Provide the general company policy relating to final approach & threshold speeds (see AIP-ENR *Aircraft Speeds; Handling Speeds*).

- 2C4.8 Address, at least, each of the following topics:

- Approval for low visibility operations (see CAR 257; CAAP LVO-1)
- Minima to be used for low visibility operations
- Low visibility/Autoland crew procedures
- Aircraft environmental limits for the minima being flown
- A list of runways approved for low visibility/Autoland operations
- Nomination of 'monitoring pilot' and 'lookout pilot' (lookout when approaching minima)
- Limitations on conduct of low visibility/auto-landings including recency, nominated crew etc
- Action in the event of system failures
- Reporting and MEL requirements
- Approved flap positions
- Precautions to be taken when the ILS critical areas are not protected
- Aircraft and flight crew recency requirements.

- 2C4.9 Specify the immediate and other post-landing procedures for company operations, including:

- Aircraft configuration clean-up
- Taxi clearance [see AIP-ENR *Taxi Clearance; Taxiing After Landing (CTA); Taxiing After Landing (Heli)*]
- Parking and securing the aircraft (both at bases and away from bases, noting Section 24 of the Act)
- Weather and animal protection
- Wheel chocks and tie downs where required
- Relevant equipment performance reports (e.g. RVSM).

- 2C4.10 Set out procedures to ensure company operations are in keeping with noise abatement regulations and restrictions in accordance with AIP-ENR *Noise Abatement Procedures*; AIP-GEN *Aircraft Noise – Operational Restrictions*.
- 2C4.11 Specify conditions for the use of enhanced and synthetic vision systems and head-up displays. Refer to CAO 82.0.3D and Chapter 6.23 and Attachment J of Annex 6, Part I International Commercial Air Transport — Aeroplanes, to the Chicago Convention.

2C5 Adverse Weather Operations

- 2C5.1 Cold weather operations
- 2C5.2 Flight in Icing Conditions
- 2C5.3 Hot weather operations
- 2C5.4 Thunderstorm/hail/turbulence avoidance
- 2C5.5 Windshear:
- Avoidance
 - Actions on encountering
- 2C5.6 Landing on wet or contaminated runways
- 2C5.7 Volcanic Ash
- 2C5.8 Single-engine IFR in adverse conditions

Explanation of Headings

- 2C5.1-2 Detail the requirements for ground operations in cold weather, including pre-flight procedures for inspection of aircraft in frosty and freezing conditions and use of anti-icing and de-icing equipment. Also detail the procedures for the prevention and removal of airframe and engine air intake icing while in flight, fuel freezing and altitude correction. (CAR 238)
- 2C5.3 Provide company procedures for operations in very hot weather conditions.
- 2C5.4 Include the company policy and procedures for flight in the vicinity of thunderstorms/hail and in moderate to severe turbulence, including heavy aircraft wake turbulence (AIP-ENR *Wake Turbulence Separation Standards*; *Weather and Wake Turbulence System Alerts*).
- 2C5.5 Set out the procedures to be followed to anticipate and respond to an encounter with severe windshear during take-off and approach to land (AIP-ENR *Windshear Warning Service*, AIP-GEN *Hazardous Weather*, *Windshear – Pilot Reporting*).
- 2C5.6 Detail company policy, techniques and performance requirements for landings on wet or contaminated runways (see example in Annex B to this CAAP).
- 2C5.7 Detail company policy for flight, if at all, in or around various levels of atmospheric volcanic ash (see AIP-ENR *Airways Clearance – Volcanic Ash*; AIP-GEN *Volcanic Activity*; *Volcanic Activity Advisory* and Appendix B10 to this CAAP – Adverse weather operations).
- 2C5.8 Provide any directions under CAR 175A (2) for single-engine flight in adverse weather conditions (AIP-ENR *Low Visibility Operations*; *Low Visibility Procedures* and AIP-GEN *Hazardous Weather*) (also see guidance in Annex B to this CAAP).

PART D – SPECIAL OPERATIONS

2D1 Special Operations

- 2D1.1 Land and Hold Short Operations (LAHSO)
- 2D1.2 Extended Diversion Time Operations (EDTO)
- 2D1.3 Approved Single-Engine Aeroplane operations
- 2D1.4 Low flying operations
- 2D1.5 Water operations (floating hull and float-equipped aircraft)
- 2D1.6 Mercy flights including helicopter water rescue operations
- 2D1.7 Polar operations
- 2D1.8 Night Vision Goggles operations
- 2D1.9 Helicopter sling load, rappelling and winching operations
- 2D1.10 Marine pilot transfer
- 2D1.11 Aerial fire fighting
- 2D1.12 Helicopter spraying operations
- 2D1.13 Other Aerial Work
- 2D1.14 International operations
- 2D1.15 High altitude operations
- 2D1.16 Exemptions from CAR 1988
- 2D1.17 General provisions

Explanation of Headings

- 2D1.1 Note the company policy and training qualification for pilots to participate in LAHSO (see CAO 40.0.4 Appendix 1 and 2). Further information is in AIP-ENR *LAHSO Operations* and AIP-AD *Hold Short Lights*.
- 2D1.2 Detail the company procedures necessary to meet the operational requirements of CAO 82.0.3A to 3BC and Appendix 3 to 5 for Extended Diversion Time Operations (also see AIP-ENR *Operations in Controlled Oceanic Airspace* and CAAP 82).
- 2D1.3 The following information should be included in support of Approved Single-Engine Aeroplane (ASEA) operations (see CAR 174A, 174B and 175A and CAO 82.3):
 - Letters of agreement between the training and checking contractor and the operator
 - Company ASEA passenger carrying limitations
 - ASEA take-off emergency procedures, runway specific for RPT operations
 - Routes used for RPT operations, showing the design criteria
 - Procedures for the use of other than automatic engine ignition systems
 - Procedures for the pilot-in-command in the event of a chip detector warning
 - Procedures to be followed by the pilot-in-command in the event of a fire warning
 - ASEA Minimum Equipment List (MEL) and procedures (see CASA Form 1046)
 - Procedures to be followed by the pilot-in-command:
 - in the event of an engine oil system contamination warning
 - following an inadvertent engine shut down and relight event
 - in the event of exceeding an engine performance parameter
 - in the event of potential malfunctions on take-off or landing
 - in avoiding certain areas in the event of a forced landing
 - in route selection in consideration of terrain and weather.

- 2D1.4 Include any low flying authorisations and conditions (see CAR 141 (FTO), 157, CASR 137.140, 145 (AAp) and CAO Part 29).
- 2D1.5 Detail the procedures for water operations (floating hull and float-equipped aircraft) to comply with CAR 169, 195, 197, 198 and CAO 20.11.8 and relevant access lanes in line with CAO 95.22.
- 2D1.6 Provide the company policy on mercy flights and, where applicable, the authorisations and procedures necessary to comply with the AIP-ENR requirements under *Special Requirements – Mercy Flights* and AIP-GEN *Participation in Searches* (also see CAO 95.23, 26 for coastal surveillance and SAR operations information). Detail any helicopter water rescue operations procedures. CAO 95.7 provides exemptions from certain CAR in carrying out this type of operation.
- 2D1.7 Include the strategies, procedures and plans in accordance with CAO 82.0.3BD and Appendix 6 of the CAO for the conduct of polar operations. Note that procedures relating to crew exposure to cosmic radiation should be detailed under heading 1B3.9 in Volume 1.
- 2D1.8 Provide the detailed information required for company operations to comply with CAO 82.6 and any other CASA directions/AOC conditions relating to company NVG Operations. Note that the training and checking requirements for NVG operations should be placed in Volume 4 of the manual (also see AIP-ENR *Night Vision Devices and Obstruction Lighting*).
- 2D1.9 Include instructions to pilots, aircrew/winch operators and other personnel involved in the conduct of winching and/or rappelling operations, as appropriate, covering:
- equipment pre-flight and serviceability checks
 - all normal and emergency operating drills and procedures
 - operating crew duties
 - intercom procedures and phraseology
 - pilot qualifications, training and recency requirements
 - aircrew/winch operator qualifications, training and recency requirements
 - risk assessment of all aspects of particular flights
 - Any additional requirements mentioned in CAO 29.6 and 29.11.
- Include instructions to pilots and other company personnel involved in the conduct of sling load operations covering, in detail, all normal and emergency procedures and risk assessment for particular flights (CAO 29.6 and 29.11). Also include any CAO 95 exemptions for these operations.
- 2D1.10 Provide procedures and requirements for marine pilot transfer in accordance with CAO 95.7.3.
- 2D1.11 Guidance material relating to additional Operations Manual inclusions for firefighting operations can be found on the National Aerial Firefighting Centre's website at www.nafc.org.au. Operators are to ensure that information in their manuals following this material is consistent with regulatory requirements.
- 2D1.12 CAO 20.21 and 40.6 are applicable.

- 2D1.13 Incorporate the procedures required for carrying out 'other' Aerial Work operations. Some relevant references include:
- CAR 144, 149, 150, 151, 155, 156, 163AA.
 - CAOs 20.16.3.15, 29.3, 5, 6, 8, 10 and 11.
 - CASR 137.175.
 - AIP-ENR Special Requirements.
- 2D1.14 Provide the additional procedures for operational staff carrying out duties in respect of international flights. References include:
- CAR 78(2), 147, 181 (RVSM), 223, 233(2)
 - CAO 82.3.9A, 82.5.9A, 95.9
 - AIP-GEN Entry, Transit and Departure of Aircraft; Passengers; Crew; and Cargo
 - ICAO Annex 6, Part 1, Section 6.23 which details carriage of documentation requirements.
- 2D1.15 Detail any special crew and aircraft requirements for high-altitude flight operations.
- 2D1.16 Include details of any CASA exemptions from the regulations and Orders [e.g. CAO 95.7 (Heli); CAO 95.53, 95.7.2 and 3 (Balloons)].
- 2D1.17 In addition to the other requirements of this Part the operator of an aircraft engaged in specialised operations should include information about the following matters relating specifically to those operations (if not included elsewhere in the manual):
- safety and risk management procedures and aerial work zone plan and establishment processes
 - task and role specialised aerial work techniques
 - crew communication and work procedures
 - crew selection and training
 - equipment serviceability checks
 - operational safety and 'go', 'no-go' decision making
 - company operating and performance limitations
 - emergency procedures
 - handling and operation of specialised equipment
 - any additional procedures and instructions as required by CASA
 - procedures to monitor and review the effectiveness of their operations and make improvements when and where required based on those reviews.

2D2 Emergency Procedures

- 2D2.1 Declaration of emergency
- 2D2.2 Crew coordination during anomalous, abnormal or emergency situations
- 2D2.3 Emergency checklists
- 2D2.4 Emergency change of altitude
- 2D2.5 Communication failure
- 2D2.6 Continuation of flight with one engine inoperative (Drift down)
- 2D2.7 Navaid failure/failure of on-board navigation equipment
- 2D2.8 Air crew incapacitation
- 2D2.9 Serious illness aboard aircraft
- 2D2.10 Passenger control in abnormal situations
- 2D2.11 Survival equipment

- 2D2.12 Action in the event of unlawful interference
- 2D2.13 Interception of civil aircraft

Explanation of Headings

- 2D2.1 Identify the company procedures for declaring an emergency or threat to safety of air navigation (CAR 191-194. Also see AIP-GEN *Aerodrome Emergencies* and AIP-ENR *Emergency Procedures*).
- 2D2.2 For multi-crew operations, detail the procedures to be followed in the event of anomalous system indications, abnormal flight or in an emergency with respect to the roles and duties of the Pilot Flying (PF) and Pilot Monitoring (PM).
- 2D2.3 Detail the company policy for use of emergency checklists (CAO 20.13), including the conditions for use and memory items.
- 2D2.4 Provide the procedures required for an emergency change of altitude. (AIP-ENR *Operations in Oceanic Controlled Airspace*)
- 2D2.5 Provide the procedures to be followed and the use of non-radio signals in the event of communication failure (see CAR 185 to 187, 189 and AIP-ENR *Signals for the Control of Aerodrome Traffic and Emergency Procedures*).
- 2D2.6 Detail the company and regulatory procedures to be followed for the continuation of flight in multi-engine aircraft with one engine inoperative (CAO 20.6).
- 2D2.7 Provide the procedures to be followed after failure of external or on-board navigation equipment. See CAO 82.5 and AIP-GEN *Abnormal Operation of Radio Navigation Aids*.
- 2D2.8 State the company procedures to be followed in the event of single or multi-crew pilot incapacitation in flight.
- 2D2.9 State the company procedures to be followed in the event of serious illness aboard an aircraft in flight.
- 2D2.10 Detail the announcements and other strategies for passenger control in abnormal situations (CAO 20.11.14).
- 2D2.11 Detail the conditions for and the procedures for the carriage, maintenance and use of emergency/survival equipment (CAR 253, CAO 20.11 and AIP-GEN *Emergency Locator Transmitter*).
- 2D2.12 Describe the company policy and procedures for action in the event of unlawful interference, such as a bomb threat, hijack etc (see AIP-ENR *Unlawful Interference*). This information is required here, so that crew can refer to it in flight.
- 2D2.13 Include the procedures to be followed in the event of interception of company aircraft by military aircraft (AIP-ENR *Visual Signals for use in the Event of Interception*) in an Australian or overseas territory (International Operations).

PART E – AIRCRAFT ADMINISTRATION**2E1 System of maintenance and defect reporting**

- 2E1.1 System of maintenance
- 2E1.2 Maintenance Release and flight log procedures
- 2E1.3 Recording defects
- 2E1.4 Corrective action procedures
- 2E1.5 Post-maintenance check flights
- 2E1.6 Pilot maintenance
- 2E1.7 Lightning strike
- 2E1.8 Bird/animal strike
- 2E1.9 Procedures in the event of unserviceability away from home and overseas
- 2E1.10 Test flights
- 2E1.11 EDTO/RNP
- 2E1.12 ASEA
- 2E1.13 Autoland
- 2E1.14 Permissible unserviceabilities – MMEL/CDL
- 2E1.15 Ferry flights with inoperative engines
- 2E1.16 Weight control of aircraft
- 2E1.17 CASA authorisations
- 2E1.18 Maintenance Control Manual

Explanation of Headings

- 2E1.1 Describe the key features of the system of maintenance for company aircraft for non-maintenance operational staff. (CAR 39, 40, 41, 42, 42V, 42W, 42X, 42ZC, 42ZE, 51, 52, CASR Subpart 42.B)
- 2E1.2 Detail company procedures to ensure flight and ground support crew conform to the system of maintenance and comply with the regulatory requirements in relation to Maintenance Releases and Flight Logs. Some relevant references include:
 - CAR Part 4A, Divisions 9, 10
 - CAR 43B, 47, 49, 50, 51, 248
 - CASR 42.C.4, 42.355, 42N.
- 2E1.3-4 Provide procedures for flight and ground crew on defect reporting and corrective action procedures, including overweight and heavy landings (CAR 51, 51A, 51B and 52, CAAP 51-1(2))
- 2E1.5 Detail any precautions related to post-maintenance check flights.
- 2E1.6 Detail the maintenance tasks that can be carried out by pilots (CAR Schedule 8, CASR 42.300, 42.M, 137.230).
- 2E1.7 Provide the company procedures for flight crew and ground support staff in the event of a lightning strike to an aircraft.
- 2E1.8 Provide the company procedures for flight crew and ground support staff in the event of a bird/animal strike to an aircraft.

- 2E1.9 Detail the procedures for personnel to follow in the event of an aircraft unserviceability away from the company's maintenance bases including, where applicable, overseas.
- 2E1.10 Detail precautions and restrictions for aircraft undergoing test flights (CAR 222 and 262AS).
- 2E1.11 Where applicable, detail any specific equipment requirements or restrictions in respect of EDTO (CAO 82.0 Appendix 3-5) and RNP (CASR Subpart 91.U).
- 2E1.12 Provide relevant operational airworthiness information for staff involved in ASEA operations.
- 2E1.13 List any operational airworthiness requirements for Autoland operations for non-maintenance staff, including monitoring of 'required accuracy' procedures.
- 2E1.14 Provide general procedures for reporting and correction of permissible unserviceabilities as detailed in aircraft MMEL/CDL. Reference the specific requirements listed in each separate sub-volume 2A of the Operations Manual.
- 2E1.15 Provide procedures in the event of ferry flights by multi-engine aircraft with one engine inoperative (CAO 29.8).
- 2E1.16 Detail the company requirements to comply with CAO 100.7 – Weight control of aircraft.
- 2E1.17 Include any procedures related to CASA maintenance authorisations or directions regarding initial and continuing airworthiness (CAR 38, 82.3.4A, CASR 39.003).
- 2E1.18 Provide the location of copies of the Maintenance Control Manual available for operational staff to inspect.

SUB-VOLUME 2A – SPECIFIC AIRCRAFT TYPE PROCEDURES

2AA.1 Aircraft Type 1

- 2AA.1.1 Manual, sub-volume and aircraft type names
- 2AA.1.2 Use of POH, AFM, OM and operational differences
- 2AA.1.3 Normal Operations and supplementary procedures
- 2AA.1.4 Check lists and memory items
- 2AA.1.5 Crew complement and duties
- 2AA.1.6 Permissible unserviceabilities – MMEL/CDL
- 2AA.1.7 Performance
- 2AA.1.8 Weight and balance
- 2AA.1.9 Operating limitations
- 2AA.1.10 Emergency and abnormal procedures
- 2AA.1.11 Emergency evacuation procedures
- 2AA.1.12 Additional headings as required

Note: Add additional sub-volumes for each aircraft type on the company's AOC. Also see general information and examples at Appendix B1.

Explanation of Headings

2AA.1.1 Company, manual, sub-volume and aircraft type names, e.g.:

- ABC Air Transport
- Operations Manual
- Sub-volume 2A
- C 208 Flight Operations.

2AA.1.2 The aircraft flight manual (AFM) by itself, or in conjunction with an aircraft owner's or manufacturer's manual may contain the information required in this section of the manual. When it is the operator's intention that the aircraft is to be operated strictly in accordance with the requirements of those manuals, the relevant part of those manuals need only be referred to under the appropriate section of this sub-volume. Where a manufacturer's or owner's manual is used, its nomenclature, date of issue or amendment should be specifically identified. In addition, the operator should mandate its carriage in the aircraft under the same conditions as the AFM.

Where different models of the same type of aircraft are operated the requirement may be met by the inclusion of a statement covering the differences between models [see CAR 138, 139, CAR 54, CASR 137.245A (AAp)].

2AA.1.3 Include detailed type-specific flight conduct procedures either here or in an appendix to each flight operations sub-volume.

Where the operator chooses to use procedures set out in the aircraft flight manual or manufacturer's or owner's manual, reference may be made to the applicability of these procedures. CASA will accept manufacturer's procedures as the basis for an approval under CAR 232.

For a CAR 232 approval, where the operator institutes procedures which are at variance with those contained in manufacturer's manuals, the operator will need to provide CASA with written justification for each variation to the manufacturer's procedures.

- 2AA.1.4 CAR 232 requires a flight check system to be established for each aircraft type, setting out the procedures to be followed at take-off, in-flight, on landing and in emergency situations. They are to be specified or set out in these sections. The use of checklists, details of crew co-ordination and visual and instrument departure and approach procedures should be included if they are specific to the aircraft type.
- 2AA.1.5 The specific duties of flight crew in respect to the operation of the aircraft should be included (see Section 1B1 in Volume 1). Relevant references include CAR 208, CAO 82.3.8, 9 and 82.5.8.
- 2AA.1.6 Detail the permitted operations and rectification schedules for permissible unserviceabilities in accordance with the MMEL and CDL (see CAR 43, 49, 208 and CAO 20.18.10).

Generally, the MEL relates to items or equipment which may be inoperative without affecting the airworthiness of the aircraft. The CDL defines the panels or parts which may be missing from the aircraft structure without affecting airworthiness, but which normally have an effect on the aircraft performance. The Operations Manual must describe how the MEL and the CDL should be promulgated and used. The actual status of the MEL/CDL, that is, whether they are approved by CASA and whether they have extra items added by the operator, should be noted.

- 2AA.1.7 This section typically contains take-off and landing data for each usable runway at each destination and alternate aerodrome. Where an operator has an extensive route network, the information could be presented in separate volumes for different geographical areas. The manual must contain information on the method of derivation of the data presented, in agreement with the data presented in the flight manual. Guidance on how to use the data presented and a number of examples of use of data should be included.

The 20.7 series of CAO, detailing weight and performance for the operation of aeroplanes and the Australian Performance Supplement of the approved aircraft flight manual (AFM) for multi-engine helicopters, will be relevant to this subsection.

For aircraft which have no performance information or are unable to meet the required performance standards (e.g. poor performing piston-engine light twins), the Operations Manual must include a method for determining the applicable minima for all company operations. Further guidance is in Appendix B12 to this CAAP.

Sections 8 and 12 of CAO 20.7.4 are relevant to the operation of a multi-engine aeroplane below 5 700 kg engaged in CHTR or AWK operations (not including jets above 2 722 kg). The procedures to be specified in the Operations Manual are those performance considerations that relate to the continuation of flight following an engine failure (See CAO 20.6). For jets above 2 722 kg and aeroplanes above 5 700 kg, in all operations, CAO 20.7.1B subsection 14 is relevant and for aeroplanes not above 5 700 kg engaged in RPT operations, CAO 20.7.2 paragraph 8.1 is relevant.

Specific instructions relating to fuel usage rates for climb, cruise and holding which are to be used in conjunction with the operator's fuel policy as set out in Section 2B2 are to be provided in this section.

- 2AA.1.8 Include the company procedures necessary to ensure the aircraft is operated in accordance with the AFM weight and balance requirements (see CAR 235, CASR 137.5 and CAO 20.7.1, 20.7.1B, 20.7.4, 20.16.1 to 3).
- 2AA.1.9 List any additional operating limitations and/or reference the AFM where applicable.
- 2AA.1.10-11 Specify the emergency procedures in relation to the following events (CAO 20.11.10 to 12):
- emergency decompression, where applicable;
 - fire on the ground or in the air;
 - flight crew compartment impact drill;
 - emergency evacuation;
 - ditching, where applicable;
 - in-flight warning systems alerts (including CAO 82.3 Appendix 5);
 - landing with undercarriage up or not locked;
 - declaring an emergency and liaison with RFFS (AIP-GEN *Aerodrome Emergencies*);
 - loss of aircraft control
 - other system failures or alerts.

Note: See further information on developing Specific Aircraft procedures at Annex B of this CAAP.

11. Contents of Volume 3 – aerodromes and routes

11.1 As with the preceding sections of this CAAP, this section details a structure for company Operations Manuals, in this case an aerodrome and route guide. Once again, operators need not adhere to this structure exactly, but should ensure that all headings are addressed somewhere in the manual, or marked 'Reserved' if they are not applicable to their operation. Additional headings should be included as required.

PART A – AIRSPACE, ROUTES AND AERODROMES/HLSS¹¹

3A1 Operations in different classes of airspace

- 3A1.1 Class A & C
- 3A1.2 Class D
- 3A1.3 Class E
- 3A1.4 Class G & CTAF
- 3A1.5 RVSM Airspace
- 3A1.6 RNP Airspace
- 3A1.7 Prohibited and restricted areas
- 3A1.8 Hazardous Airspace
- 3A1.9 Helicopter lanes of entry and aerodrome operations

¹¹ As with other sections, headings marked with an asterisk (*) are future requirements under draft CASR Parts 119 and others and are optional until the new standards are implemented. They are included here to help operators future-proof their Operations Manuals

Explanation of Headings

- 3A1.1-4 Include any specific company policy and conditions for operations in different classes of airspace. AIP-ENR *ATC – Classes of Airspace; Classes of Airspace – Services and Requirements* contain information relating to the services and requirements for aircraft operations in all types of airspace (CAO 82.3.7.2.1 is relevant to Class E).
- 3A1.5 See Section 2B1 in Volume 2: *Planning altitudes and flight levels* and 2B6.8 *Reduced Vertical Separation Minima (RVSM) operations*.
- 3A1.6 See Section 2B6.9 in Volume 2 *Required Navigation Performance (RNP) operations*.
- 3A1.7 See section 2B1.6 in Volume 2 *Prohibited and restricted areas*.
- 3A1.8 Include any procedures for identifying potentially hazardous airspace, including avoidance and re-routing measures. Identification may be via an operator's SMS.
- 3A1.9 Detailed information is in AIP-ENR *Helicopter Operations at Aerodromes and in Helicopter Access Corridors and Lanes*. Also include any exemptions from the CAR relating to helicopter operations at aerodromes that the company may have under CAO 95.7.

3A2 Routes

- 3A2.1 Policy
- 3A2.2 Standard routes and limitations
- 3A2.3 RVSM routes
- 3A2.4 Levels
- 3A2.5 Position fixing, reports and waypoints
- 3A2.6 ASEA route restrictions

Explanation of Headings

- 3A2.1 State the company policy, if any, for the use of standard/flex/other routes. AIP-ENR *Air Route Specifications; Helicopter Routes; Other Routes*; and AIP-GEN *Air Route Specifications and Chart Depictions* contain or reference general information on ATS routes and procedures. CAR 218 and 219, relating to pilot qualifications are also relevant.
- 3A2.2 Include the standard routes for all destinations served by the operator. This should include the names of suitable alternate aerodromes for each route. Suitable contents for a route guide can be found in Section 3 of Appendix 2 in CAO 82.5.
- 3A2.3 Detail routes and conditions to be followed for RVSM flights.
- 3A2.4 Detail the company policy, in accordance with AIP requirements, with respect to levels for each route to be flown (AIP-ENR *Cruising Levels; Changing Levels*).
- 3A2.5 State the company policy with respect to position fixing, position reporting and waypoints (see AIP-ENR *Position Reports; Position Fixing; Name-Code Designators for Significant Points*; AIP-GEN *Intersection Waypoints; Reporting Points*).
- 3A2.6 Insert any additional restrictions on routes to be operated by ASEA.

3A3 Aerodromes and Helicopter Landing Sites

- 3A3.1 General Standards
- 3A3.2 Procedures for use of unapproved aerodromes
- 3A3.3 Helicopter Landing Sites
- 3A3.4 Take-off and landing distances available
- 3A3.5 Elevations
- 3A3.6 Facilities
- 3A3.7 Obstructions
- 3A3.8 Weather minima
- 3A3.9 Low visibility/Autoland runways
- 3A3.10 Narrow runways
- 3A3.11 CASA authorisations

Explanation of Headings

- 3A3.1 CAR 92 (1) is relevant. For operators who use aeroplane landing areas and helicopter landing sites a policy is required. The operational aspects of CAAPs 92-1 and 92-2 may be relevant. For RPT operators CAR 92A is relevant and CAO 82.3 paragraph 5.3 is relevant to low capacity RPT operations (also see CAR 235A, 248, CASR 139, CAO 82.3.5, 5A, Appendix 3, CAO 82.5.5, 5A, CASR 137.105 (AAp), AIP-ENR *Suitability of Aerodromes*, AIP-AD *Aerodromes/Heliports Availability* and *Index to Aerodromes/Heliports*).

AIP-ERSA and DAP are acceptable references for aerodrome physical, technical and approach information; however operators must have procedures to ensure that operational personnel are able to comply with the requirements of these documents (see Annex C to this CAAP for further information and examples).

- 3A3.2 See CAR 92A.4 and 4A. AIP-ERSA GEN-CON 1 provides a useful checklist for pilots intending to use uncertified or unregistered aerodromes.
- 3A3.3 Describe the procedures and criteria by which pilots can assess the suitability of HLSs (including on-shore and off-shore helidecks) and be satisfied that they can safely operate to and from the site.

CAO 95.7 provides a number of exemptions for helicopter ground operations at aerodromes. CAAP 92-1(2) details design requirements for HLSs.

- 3A3.4-5 Describe the procedures and criteria by which pilots calculate the take-off and landing distances and obstacle clearance gradients required for the range of conditions likely to be encountered in company flight operations. (Relevant references include AIP-ERSA *Runway Distance Supplement* and its introduction). Obstacle information is available from aerodrome operators.
- 3A3.6 Where applicable, list any specific requirements for approach procedures at nominated aerodromes. These procedures should be additional to the general approach provisions provided earlier in the manual at 2C4 and 2C6.3.
- 3A3.7 Detail any special or additional company-specific aerodrome limitations if required.
- 3A3.8 Detail any general or special or additional company-specific aerodrome limitations if relevant. AIP-ENR *Aerodrome Meteorological Minima* contains general requirements.

- 3A3.9 Include the requirements for approval and evaluation of runways for low visibility/Autoland operations. (CAAP LVO-1; AOCB – *Approval of runways for Autoland Operations*.)
- 3A3.10 Where operations are conducted into aerodromes with runways narrower than that required by the aircraft's original type certificate, provide the procedures and requirements necessary to ensure safe operations (see CAAP 235-1).
- 3A3.11 Include any CASA authorisations and conditions for operations to specific aerodromes.

12. Contents of Volume 4 – training and checking organisation

12.1 The final volume of the Operations Manual guide addresses company requirements and procedures for training and checking activities and for flying school operations. Information already addressed in an earlier part of the company Operations Manual need not be reproduced here, but should be suitably referenced. Form 121 of the AOCB, *Sample Table of Contents of Training and Checking Manual*, is a useful checklist that expands on some of the requirements listed in this section.

PART A – FUNCTIONS AND STRUCTURE

4A1 Functions and structure of the organisation¹²

- 4A1.1 Structure of the organisation
- 4A1.2 Facilities and resources
- 4A1.3 Requirements for training and checking personnel
- 4A1.4 Training and approval of training and checking personnel
- 4A1.5 Crewing of aircraft by CASA flying operations inspectors

Explanation of Headings

- 4A1.1 Describe the key positions, duties and accountabilities of the training and checking organisation, along with a statement of its authority and role (CAR 217).
- 4A1.2 Describe the facilities, equipment and training aids available to the organisation, including the location and contents of the training reference library.¹³
- 4A1.3 Provide the selection, recent experience and completion standards requirements for training and checking personnel [CAR Part 5, CAR 217, (CASR Subparts 61.T-Y)].
- 4A1.4 Detail the procedures for training, proficiency testing and approval of supervisory, training and checking personnel [CAR Part 5, CAR 217, (CASR Subparts 61.T-Y)].

¹² As with other sections, headings marked with an asterisk (*) are future requirements under draft CASR Parts 119 and others and are optional until the new standards are implemented. They are included here to help operators future-proof their Operations Manuals.

¹³ The information in 4A1.1 and 2 is required here only if different or additional to that set-out in Part A of Volume 1.

- 4A1.5 If CASA flying operations inspectors are authorised as part of the operating crew it will be necessary to lay down their authority, qualifications and recency in respect to the operation. Operators will need to consider their position in respect to any untoward happenings to the aircraft, its crew and passengers in the event that a CASA inspector is authorised as part of the operating crew.

Note: CAO 82.1.3, Appendix 2.4, 82.3.3, Appendix 2.4, 82.5.3, Appendix 2 and 82.7 Appendix 1-2.4, along with the Appendices to CAO 40.1.0 contain an outline of the minimum information required to be included in this Volume with respect to training and checking organisations (also see CAR 217).

PART B – TRAINING PROGRAMS¹⁴

4B1 Training syllabi and checking programs

- 4B1.1 Specific aircraft systems and operation
- 4B1.2 Differences and familiarisation training requirements
- 4B1.3 Recurrent (cyclic) training and checking program
- 4B1.4 Crew Resource Management training
- 4B1.5 Threat and Error Management
- 4B1.6 Command course
- 4B1.7 Human Factors
- 4B1.8 Steep approach procedures
- 4B1.9 Short landing operations (including LAHSO)
- 4B1.10 EDTO
- 4B1.11 NVG operations
- 4B1.12 RNP operations
- 4B1.13 ASEA
- 4B1.14 ACAS/TCAS
- 4B1.15 Low visibility/Autoland operations
- 4B1.16 Upset Prevention and Recovery Training (UPRT)
- 4B1.17 Load Control
- 4B1.18 Dangerous goods
- 4B1.19 Cabin crew
- 4B1.20 Cruise Relief (Augmented Crew) procedures
- 4B1.21 Crew emergency training
- 4B1.22 Ground support functions and equipment
- 4B1.23 Non-technical skills training — operations staff other than flight crew
- 4B1.24 Ferry flights
- 4B1.25 Endorsement training
- 4B1.26 Route qualifications/line training
- 4B1.27 General guidance on training courses and tests

Explanation of Headings

- 4B1.1 Provide detailed programs, including completion standards for the training and checking of company staff and contractors for all aircraft systems and operations to be carried out, including the emergencies listed at 2AA.1.10 and 2AA.1.11 (also see CAO 40.1.0 Appendix 2 to 5).

¹⁴ Note that training of engineering and maintenance staff should be set out in the Maintenance Control Manual.

- 4B1.2 Provide detailed 'differences and familiarisation' programs for the training and checking of relevant company staff.
- 4B1.3 Include the procedures necessary to ensure that flight crew are able to meet recurrent training and checking (or future Advanced Training and Quality program) requirements [see CAO 40.1.5 Appendix 2 (ATPL)].
- 4B1.4-7 Provide the programs and procedures to ensure that flight crew receive relevant Crew Resource Management, Threat and Error Management, Human Factors and Command training and the syllabi for these programs.
- 4B1.8-9 Where applicable, include the syllabi of training for approved steep approach and short landing operations, including LAHSO. (CAO 40.0.4)
- 4B1.10 Provide the company procedures for the initial and recurrent training, proficiency checking and competency evaluation for EDTO under the following headings (see CAO 82.0 Appendix 5.10):
- if standby sources of electrical power significantly degrade cockpit instrumentation to the pilots — simulation of aerodrome approaches using standby power as the sole power source
 - contingency procedures for each area of operation intended to be used
 - evaluation of, and response to, probable propulsion and airframe systems failures
 - diversion procedures and diversion decision-making processes
 - the EDTO regulatory framework and operational approvals.
- 4B1.11 Provide detailed procedures to ensure training in, and checking of, NVG operations complies with CAO 82.6 Appendix 1 and the training and checking requirements under Part 2 of Appendix 2 and Parts 3 to 6 of Appendix 3 of the Order.
- 4B1.12 Provide the details of training programs that comply with the standards for RNP training programs set out in Subpart U of CASR Part 91 MOS (see CASR 91.5155 and 5170).
- 4B1.13 Provide the program and completion standards for ASEA operations for captains and co-pilots, including:
- Engine failure/malfunction, which necessitates stopping the aircraft on the ground.
 - Engine failure/malfunction, which necessitates a landing on the most suitable terrain adjacent to an aerodrome, usually organised into two sets of procedures depending on the height of the aeroplane at the time of the engine failure.
 - Engine failure/malfunction, which necessitates turning to execute a glide landing upon a serviceable runway, including a 'turn back' manoeuvre. This procedure is to contain a minimum indicated airspeed and altitude requirement before it may be attempted.
 - Forced landing initiated from normal cruising altitude, during climb and descent and from the approach to land phase, in VMC and IMC down to 1000 feet above ground level.
 - Additional procedures for the conduct of a forced landing in IMC to ground level.
- 4B1.14 Present the program and completion standards for ACAS/TCAS operation training.
- 4B1.15 Detail the flight crew training program and completion standards for low visibility/Autoland operations (see CAAP LVO-1, Section 10 *Conditions on exemptions*).

- 4B1.16 Provide details of the training program to ensure pilots are trained to recognise the cues of an aircraft upset or unusual attitude and they to recover the aircraft to normal flight. The FAA's AC-138 and ICAO Document 10010 provide useful resources on this subject.
- 4B1.17 Present the program and completion standards for qualification as a company Load Controller.
- 4B1.18 Detail the required syllabus and frequency of training in dangerous goods handling and carriage and the applicability to operational staff and contractors of the company. [CASR 92.055, 92.135 and Division 92.C, AC92-01(0), AC92-03(0) and the AOCH Volume 4 – *Dangerous Goods Training and Checking*]
- 4B1.19 Detail the required programs of training, including proficiency checks (under CAR 217 and future Air Transport regulations), for cabin crew in accordance with CAR 253, CAO 20.11.12, 13.3 and Appendix 4. Cabin crew training and checking programs should include, as applicable:
- Initial training
 - Conversion training
 - Differences training
 - Line training
 - Recurrent training
 - Refresher training
 - Senior cabin crew training
 - Proficiency checks
- 4B1.20 Provide details of training for relief crew whose duties will be predominantly in the cruise phase of a flight, including the HF and NTS required prior to exercise the privileges of the role. The Fatigue Management section on the CASA website and ICAO's FRMS Implementation Guide for Operators have useful practical and theoretical information on the fatigue aspects of the cruise relief pilot's role.
- 4B1.21 Provide the company program for crew emergency training (see CAR 253).
- 4B1.22-23 Include the training programs for ground support personnel and other staff and contractors assigned to operational duties in connection with the preparation or conduct of a flight, together with non-technical skills training for operations staff other than flight crew. This should include completion standards.
- 4B1.24 Provide the training, checking and recency requirements for ferry flights, including those with inoperative equipment (CAO 29.8.5).
- 4B1.25 Include the requirements for endorsement training on the company's aircraft.
- 4B1.26 Detail the requirements for route qualification and line training (CAR 218)
- 4B1.27 The following guidance relates to the general development and conduct of training and testing by operators.

Courses

Set out the various courses that the organisation is to conduct, for example, induction, aircraft endorsement (command, co-pilot, other crew member), cabin attendant, maritime surveillance, revalidation and currency training, conversion of overseas pilot licences [CAR 5.165(2) and CAR 5.174 (2) , (CASR 61.275)], ground or flight training covering the operation of specialist equipment for example GPS, dangerous goods to meet the requirements of CASR Subpart 92.C, cockpit resource management, human factors, LAHSO etc.

The courses conducted by the organisation will also need to include the courses required by personnel for appointment to the staff of the training and checking organisation itself.

Include the course objectives, instructional hours requirements (flight hours, simulator and other ground instruction) and the completion standards. The detail of these courses should be included in appendices to this part.

Tests

Set out the various tests that the organisation is to conduct, for example flight proficiency (line and route checks), instrument rating issue and renewal, proficiency in the execution of emergency duties. List the periodicity of tests, the purpose of the test and whether the test constitutes a check for the purpose of CAR 217(2).

For the purpose of standardisation the content of a test will normally be set down in a CASA or company test form. In this way the form will also act as an *aide memoire* to both the checking officer and the person being checked. Company devised test forms should be appended to this part.

Note: *Base and line checks are only examples of the way in which an operator may choose to meet the requirements of CAR 217(2).*

Proficiency Checks

This term is commonly used to mean a test of proficiency specifically directed towards the handling of an aircraft in normal flight manoeuvres and during the emergency or abnormal operation of the aircraft's systems. It may be desirable to conduct separate day and night proficiency checks. Sequences that could be considered for inclusion in such a check are:

- preparations for flight including:
 - loading, weight and balance considerations
 - documentation
 - pre-flight, use of lists and knowledge of crew immediate emergency actions
 - knowledge of emergency exits
- starting and abnormal starts
- simulated engine failures on take-off before and after reaching critical speeds
- crosswind, night, visual and instrument take-off
- reduced power take-offs
- level and steep turns
- engine failure in cruise and shut down in flight
- cabin and engine fires in flight and on the ground

- propeller, electrical and hydraulic systems failures
- stall recovery in various configurations
- emergency descent
- instrument approaches
- engine out landing or go around
- landings with flap and brake malfunctions
- minimum weather circuits
- crosswind and night landings
- theoretical knowledge (human factors, Operations Manual requirements).

Note 1: See Appendix II of CAO 40.1.5 for specific ATPL(A) proficiency requirements.

Note 2: Further guidance on proficiency (and line) checks is in Annex D.

Line Checks

This term is commonly used to describe a test of proficiency involving the performance of a real or simulated company revenue flight on which a crew member is being tested in his assigned role. The test involves an assessment on all phases of the flight, except that emergency procedures or other procedures which are prohibited from being tested by CAR 249 or could otherwise adversely impact on the nature of a revenue flight will not be tested. Sequences and subjects that could be considered for inclusion in a line check are:

- preparation for flight including:
 - flight planning
 - maintenance
 - passenger and load documentation
 - crew briefing
 - equipment checks
 - fuel checks and pre-flight inspection
- engine starting and ground manoeuvres
- take-off, climb cruise, descent, approach and landing
- navigation
- in-flight checks
- instrument flight techniques
- approaches and procedures
- ATS phraseology and airways operating procedures
- appreciation of forecast and prevailing weather conditions
- knowledge of aircraft systems
- handling of any emergency or abnormal procedures (simulated or real)
- command judgement or assessment in a support role
- adherence to company procedures other than aircraft handling
- interaction with passengers and with other crew members.

4B2 Training and checking procedures

- 4B2.1 Pre-flight and post flight briefings
- 4B2.2 Crew co-ordination
- 4B2.3 Allocation of pilot command responsibility
- 4B2.4 Crew composition during training and checking

- 4B2.5 Use of training checklists/supplements
- 4B2.6 Procedures for flying training and flight tests
- 4B2.7 Use of simulators and synthetic training devices
- 4B2.8 Conduct and security of examinations
- 4B2.9 Procedures to be applied in the event that personnel do not achieve or maintain the required standards

Explanation of Headings

- 4B2.1 State the company policy and requirements for pre- and post-flight briefings.
- 4B2.2-3 Consideration should be given to the circumstances in which the pilot being checked may be either the pilot-in-command, acting in command under supervision or undergoing dual instruction, and the allocation of command when two pilots of equal status crew the aircraft (see 4A1.5 and 4A1.6 in Part A of this Volume).
- 4B2.4 In aircraft crewed by two or more pilots it will be necessary to allocate responsibility for the normal and emergency operation of the aircraft. Such responsibilities are normally allocated in respect to: Pilot-in-Command (PIC), Pilot-in-command under supervision (CAR 5.40); Co-pilot (CP), PF and PM. The allocation of these duties to pilots and to other flight crew members should be clearly indicated on check lists where appropriate.
- 4B2.5 Company policy relating to the use of training checklists should be inserted here, while training-specific checklists and any other in-session/phase supplements or materials should be included either here or in a separate Appendix for use in training and checking activities.
- 4B2.6 Matters that might be considered under this heading include: commonly occurring faults to be found in flight crew in the performance of their duties and fault analysis techniques; qualifications, certifications and minimum and maximum crew numbers required (CAR 249) for aircraft operation during a test; minimum fuel loads for the simulation of certain emergency situations; simulation of aircraft weight with ballast; minimum weather conditions; limitations on flapless or touch and go landings; simulation of instrument flight; methods, procedures and limitations related to practice simulated engine failure and abnormal operations; procedures for night training (CAO 29.2) and notification of flight tests to CASA [also see CAR 5.07 (CASR 61.235), 5.42 (CASR 61.1295), CAO 40.2.1.10].
- 4B2.7 Insert procedures, requirements and privileges for the use of simulators and synthetic training devices in company training in accordance with relevant sections of CAR Part 5, CAOs 40.1.0, 40.2.1.9 and 12A, 40.3.0, 82.0 and CASR Part 60, (61.205, 61.245, 61.775, 780, 61.T.2)137.240 (AAp).
- 4B2.8 Detail the procedures for the conduct and security of examinations undertaken by flight, cabin and ground crew.
- 4B2.9 Include procedures to be applied in the event that personnel do not achieve or maintain the required standards.

PART C – ADMINISTRATIVE PROCEDURES**4C1 Administrative procedures**

- 4C1.1 Training and checking administration
- 4C1.2 Training and checking documentation
- 4C1.3 Documents to be kept and retention periods
- 4C1.4 Examination material security

Explanation of Headings

- 4C1.1 Detail the administrative procedures for conducting training and checking operations, including frequency and duration, and use of flight test numbers to ensure compliance with CAO 82.1.3, 82.3.3 and 82.5.3.
- 4C1.2-3 Detail procedures for recording and maintaining the records required under the following references:
 - CAR 5.107, 5.109, (CASR 61.355) – Retention of personal log books
 - CAR 217
 - CASR 92.145 – Retention of DG training records
 - CASR 119.255-270 – Keeping and accessibility of training files*
 - CASR 137.250 (AAp)
 - CAO 82.1 Appendix 1-2.4
 - CAO 82.3. Appendix 1-2.5, Appendix 2-5.1
 - CAO 82.5 Appendix 2-5.1
 - CAO 20.11-12 – Retention of emergency procedures proficiency certificate.
- 4C1.4 Include procedures to ensure the company maintains the security of all examination material.

SUB-VOLUME 4A – FLYING TRAINING SCHOOL OPERATIONS

PART A – STRUCTURE AND ADMINISTRATION

4AA1 Administration

- 4AA1.1 Structure of the organisation, responsibilities and communications
- 4AA1.2 Privileges and recent experience requirements for instructors
- 4AA1.3 Command responsibilities of instructors
- 4AA1.4 Instructor standardisation and proficiency checking
- 4AA1.5 Student requirements
- 4AA1.6 Credits for past training
- 4AA1.7 Student records and progress reporting
- 4AA1.8 Retention and transfer of student records
- 4AA1.9 Student and instructor log books
- 4AA1.10 Recording of synthetic training results
- 4AA1.11 Student familiarity with relevant operation manual volume

Explanation of Headings

- 4AA1.1 Detail the structure of the organisation, including duties, responsibilities and accountabilities of operational staff, along with communications protocols between instructors and the Head of Operations/Chief Flying Instructor (HOO/CFI) (CAR 5.58).¹⁵
- 4AA1.2 Include regulatory and any company-specific requirements (see CAO 40.1.7.7 to 9).
- 4AA1.3 CAR 224, 233, 239 are also relevant to training flights.
- 4AA1.4 Provide the procedures that the HOO/CFI must follow to ensure the standardisation of student instruction and to check the proficiency of instructors.
- 4AA1.5 CAR Part 2 Division 4, 5.07 (CASR 61.1295) and CAO 40.0.8 are relevant.
- 4AA1.6 Provide the company policy on credits for past training (CAR 5.83 is relevant.)
- 4AA1.7 Detail the policy and procedures for creating, maintaining, storing and content of student records.
- 4AA1.8 Detail the retention period for student records, the processes for the transfer of records to another flying training organisation and procedures for checking the validity of incoming student records. (CAR 5.57)
- 4AA1.9-10 Include instructions for the keeping and recording of flight time in student and instructor log books [CAR 5.51, 5.52, 5.85, 5.112, 5.159, 5.61, 5.73, 5.213, 5.214, CAR 216 and CAO 40.1.0.9 and 10,(CASR Division 61.A.2-3, 61.D, 61.1225).
- 4AA1.11 Include a requirement for students to be made aware of the relevant parts of the company Operations Manual.

¹⁵ This information is required here only if different or additional to that set-out in Part A of Volume 1.

PART B - CONDUCT OF TRAINING OPERATIONS

4AB1 General

- 4AB1.1 Authorisation of training flights
- 4AB1.2 Booking of solo flights
- 4AB1.3 Pre-flight and post-flight briefings
- 4AB1.4 Operations at the primary base
- 4AB1.5 Operations at other training locations
- 4AB1.6 Operations within training areas
- 4AB1.7 Cross-country operation
- 4AB1.8 Carriage of passengers on training flights
- 4AB1.9 Observance of last light limitations
- 4AB1.10 Simulation of instrument flight
- 4AB1.11 Procedures for night flying training
- 4AB1.12 Procedures for use of synthetic trainers

Explanation of Headings

4AB1.1-2 State the company policy for the authorisation of training and booking of solo flights (CASR 61.112-116).

4AB1.3 Detail the requirements for pre and post-flight student briefings.

4AB1.4 Describe company procedures and precautions for operations at the primary base, including Search and Rescue (SAR) watch procedures and responsibilities (see AIP-ENR *Ab-initio flying training*).

4AB1.5 Describe company procedures and precautions for operations at other training locations, including SAR watch procedures and responsibilities and conditions relating to flying training at temporary locations (see AIP-ENR *Ab-initio flying training*, APOCH Volume 2.9 – *Flying Training at Temporary Locations*).

4AB1.6 Include requirements and a master copy of maps (1:100,000 or larger scale) depicting:

- the boundaries and heights associated with general flying and aerobatic training areas at the primary and other bases
- travel corridors connecting aerodromes and training areas
- low-flying training areas with power lines, towers and similar obstructions to low flying aircraft marked. (CAR 141).

(Also see, where relevant, AIP-ENR *Flying Training Areas in Controlled Airspace*.)

4AB1.7 Include procedures and any company restrictions on cross-country training and solo operations, including SAR watch procedures and responsibilities and any special additional fuel requirements. Standard navigation routes for each training location must also be included.

4AB1.8 Set-out the conditions for the carriage of passengers on training flights (CAR 5.72, 5.73)

4AB1.9 Include any additional requirements for VFR training and solo flights with respect to the observance of last light limitations.

- 4AB1.10 Detail the requirements for, and restrictions on, the simulation of instrument flight in training operations (see CAR 153 and CAO 40.0.2.7).
- 4AB1.11 Requirements for supervising night flying training can be found in CAR 5.01B (CASR 61.112, 61.115, 61.1225) and CAO 29.2.
- 4AB1.12 Include procedures for conducting training in synthetic training devices [see CAR 5.60, 5.173 and 5.182 and CASR Part 60, (61.010, Division 61.T.2)].

4AB2 Student pilot activities

- 4AB2.1 Pre-flight checks by student pilots
- 4AB2.2 Operation of engines by student pilots
- 4AB2.3 Refuelling by student pilots
- 4AB2.4 Taxiing by student pilots
- 4AB2.5 Reporting of unserviceabilities by student pilots
- 4AB2.6 Use of radio by student pilots
- 4AB2.7 Student crosswind landing limitations
- 4AB2.8 Submission of flight plans by student pilots
- 4AB2.9 Aerobatics and spinning by students
- 4AB2.10 Solo practice forced landings

Explanation of Headings

- 4AB2.1 Daily inspections cannot be carried out by student pilots, but they may conduct pre-flight checks under limited supervision at the discretion of the instructor.
- 4AB2.2-3 Detail the circumstances under which student pilots may operate the engines of an aircraft with and without supervision (see CAR 225, 230 and 231 and CAO 20.9.5).
- 4AB2.3 Detail the circumstances under which student pilots may refuel an aircraft with and without supervision and the pre and post-fuelling checks to be carried out (20.9.4).
- 4AB2.4 Include the conditions for taxiing of company aircraft by student pilots (CAR 228, 229).
- 4AB2.5 State the required procedures for reporting of unserviceabilities by student pilots.
- 4AB2.6 State the policy for the use of flight radiotelephone operation by student pilots (see CAR 5.61, 5.66 and 83 to 85).
- 4AB2.7 Stipulate any restrictions beyond that specified in the relevant aircraft flight manual on crosswind landings by students.
- 4AB2.8 State the company policy and procedures for the completion and submission of flight plans by student pilots and instructors.
- 4AB2.9 Include the company policy in accordance with CAO 40.0.2 with respect to aerobatics and spinning by student pilots.
- 4AB2.10 State the conditions and parameters for solo practice of forced landings by student pilots.

PART C – TRAINING COURSES

4AC1 Training Courses (Where applicable)¹⁶

- 4AC1.1 Student Pilot (GFPT)
- 4AC1.2 Private Pilot
- 4AC1.3 Commercial Pilot
- 4AC1.4 Multi-crew Pilot
- 4AC1.5 Airline Pilot
- 4AC1.6 Instrument ratings
- 4AC1.7 Night VFR
- 4AC1.8 Instructor rating
- 4AC1.9 Agricultural rating
- 4AC1.10 Synthetic trainer operator
- 4AC1.11 Ground training courses

Explanation of Headings

4AC1.1-11 Provide the syllabi and programs for the qualifications offered by the operator. Syllabi giving block flight hours and ground instructional time should be included here or as appendices. The details of navigation flights, including standard navigation routes, which form a part of the syllabus, are also to be listed as part of that syllabus.

Day VFR syllabi for aeroplanes and helicopters and the required flight hours of CAR Part 5 for private and commercial pilot licence courses will be relevant¹⁷. Other references include:

- Student Pilot – CAR Part 5 Division 4
- Private Pilot – CAR 5.83-86.3, 93 (Heli), 94.3
- Commercial Pilot – CAR 5.119.2, 3, 5.128.2, 3, 5, 5.137.2, 3, 147.2, 3, 5.164.2, 3
- Multi-crew Pilot – CAO 40.1.8, 40.2.1.10A
- Air Transport Pilot – CAR Part 5 Division 14, CAO 40.1.5
- Instrument rating – CAO 40.2.1, 40.2.3
- Night VFR rating – CAO 40.2.2 (including night VFR agricultural rating)
- Flight Instructor rating – CAO 40.1.7, 40.3.7 (Heli), 40.7 (Balloons), CAAPs 5.14-2(0), 5.14-3(0) (Heli)
- Agricultural rating – 40.6
- Balloons – CAR Part 5, Divisions 6, 11, CAO 40.7
- Synthetic trainer operator – CASA Publication FSD 2
- Ground Training Courses – As required.

¹⁶ As of 1 September, 2014, training courses should reflect the qualifications set out in CASR Part 61. Revised guidance materials will be published closer to the implementation date.

¹⁷ CASR Part 61 and its Manual of Standards should be substituted for new or amended manuals after 1 September, 2014.

PART D – GROUND AND FLIGHT TESTS

4AD1 Ground and Flight Tests

- 4AD1.1 Authority for the conduct of ground and flight tests
- 4AD1.2 Tests and examinations
- 4AD1.3 Conduct of instrument rating and NVFR tests
- 4AD1.4 Conduct of instructor rating tests
- 4AD1.5 Further training of student pilots after failing ground or flight tests
- 4AD1.6 Flight Reviews

Explanation of Headings

- 4AD1.1 Detail the company procedures to authorise ground and flight tests [see CAR 5.94, 5.119, 5.128, 5.137 (CASR Division 61.B.4)] and the names and responsibilities of delegated staff with regulatory authorisations (see the *Industry Delegates Management Manual on the CASA website*).
- 4AD1.2 Detail the procedures for the production, conduct, marking and regular review of tests and examinations in accordance with CAR 298A to E and CAO 40.1.8 (MPL). Notification under CAR 5.42 is also relevant.
- 4AD1.3 Provide any additional procedures and precautions for the conduct of these tests.
- 4AD1.4 Detail the company and regulatory requirements for the conduct of instructor rating tests. (CAO 40.1.7.5)
- 4AD1.5 Include procedures for re-training and re-examination.
- 4AD1.6

Relevant CARs include:

- 5.17A
- 5.81
- 5.91
- 5.99
- 5.108
- 5.110
- 5.124
- 5.133
- 5.143
- 5.154
- 5.169
- 5.171, 5.180
- 5.178
- 5.211

Relevant CASRs include:

- 61.925
- 61.400
- 61.800

13. Annexes – Further information and examples

13.1 The following annexes containing general guidance and selected examples for writing Operations Manuals. They are available on the CASA website at: www.casa.gov.au. It should be noted that simple reproduction, or cutting and pasting, of examples or sections of them, will not be sufficient to gain approval for a company Operations Manual which must accurately reflect the company's operations.

Annex A – Policy and Procedures

Appendix A1 – How to write Standard Operating Procedures.

Appendix A2 – Document control system.

Appendix A3 – Example Operations Manual document control system.

Appendix A4 – Supervision of company operations.

Appendix A5 – Operational Control.

Appendix A6 – Safety Management System (SMS).

Appendix A7 – Crew health information.

Appendix A8 – Accidents and Incidents – handling and reporting.

Annex B – Aircraft Operations

Appendix B1 – Normal operating procedures.

Appendix B2 – Checklists.

Appendix B3 – Callouts.

Appendix B4 – Abnormal operating procedures.

Appendix B5 – Emergency operating procedures (including crew incapacitation).

Appendix B6 – Flight planning and preparation.

Appendix B7 – Aircraft loading; weight and balance.

Appendix B8 – Performance.

Appendix B9 – Fuel policy and associated fuel elements.

Appendix B10 – Adverse weather operations – Example Text.

Appendix B11 – Crew composition.

Appendix B12 – Aircraft Administration – References.

Annex C – Aerodromes & Routes

Appendix C1 – Route Guide.

Appendix C2 – Usability of Aerodromes – Sample Guidance.

Appendix C3 – Meteorological Guide.

Annex D – Training and Checking

Appendix D1 – Conversion and line training.

- Appendix D2 – Recurrent training and checking.
- Appendix D3 – Ground and refresher training.
- Appendix D4 – Proficiency checking.
- Appendix D5 – Emergency procedures proficiency checking.
- Appendix D6 – Route and aerodrome competence.
- Appendix D7 – Cabin Crew training.
- Appendix D8 – Human Factors and Non-Technical Skills Training.

Annex E – List of Headings

Appendix E – List of CAAP 215-1 headings for use as a checklist and a template for creating operations manuals.