

# **Commercial Pilot Licence - Air Law**

## **CAO and CAR extracts**

## IMPORTANT INFORMATION

The use of these 'selected extracts' in CASA PEXO exams is subject to the following conditions:

1. The 'selected extracts' must be as provided without any additional pages, training notes, cross references or indexes added to them.
2. Candidates may choose to take into their exams either:
  - These 'selected extracts' of CAOs, CARs and Part 61 documents; or
  - The normal set of CAOs, CARs and Part 61 documents, but NOT both.
3. Should a candidate, as a result of using 'selected extracts', find that they cannot answer a question(s) or choose an incorrect answer(s), are not permitted to use this to request a re-marking of their exam.
4. Candidates may only take 'selected extracts' into those exams where each of those documents (CAOs, CARs and CASR Part 61) are part of the 'permitted materials' for that subject.
5. A divider page, used to separate the different sections, i.e. separating CAOs from CARs and from the Part 61 portions of 'selected extracts', is approved.
6. As per the normal CASA requirements stated on page <https://www.casa.gov.au/standard-page/permitted-material-under-part-61> of the CASA web site, no tagging of these pages is permitted, however candidates may choose to underline or highlight sections of the text if they wish (also as stated on that same page of the CASA web site).

**EXTRACTS FROM THE  
CIVIL AVIATION REGULATIONS  
(CAR)**



## Regulation 2

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**visible**, in relation to lights, means visible on a dark night with a clear atmosphere.

- (4) For the purposes of Division 2 of Part 11 and Parts 12 and 13, an aircraft shall be deemed to be:
- (a) **on the surface of the water** when any part of the aircraft is in contact with the water;
  - (b) **making way** if, being under way in the air or on the surface of the water, it has a velocity relative to the air or the water, as the case may be;
  - (c) **under command** when it is able to manoeuvre as required by the rules contained in the provisions of Division 2 of Part 11 and in the provisions of Parts 12 and 13 or by the International Regulations for Preventing Collisions at Sea as set forth in Schedule 3 to the *Navigation Act 1920*;
  - (d) **under way** if, being in the air or on the surface of the water, it is not aground or moored to the ground or to any fixed object on the land or in the water.
- (5) Where any rule contained in the provisions of Division 2 of Part 11 or in the provisions of Parts 12 and 13 contains a provision similar to that of a rule contained in the Rules of the Air adopted in pursuance of the Convention, but a distance which in the last-mentioned rule is expressed by kilometres, metres or centimetres (as the case may be) is in the first-mentioned rule expressed in miles, feet or inches, an aircraft which, in respect of that distance, complies with the last-mentioned rule shall also be deemed to comply with the first-mentioned rule.
- (6) For the purposes of these Regulations, an aircraft shall be classified in accordance with the type of operations in which it is being employed at any time, as follows:
- (a) when an aircraft is being employed in aerial work operations, it shall be classified as an aerial work aircraft;
  - (b) when an aircraft is being employed in charter operations, it shall be classified as a charter aircraft;
  - (c) when an aircraft is being employed in regular public transport operations, it shall be classified as a regular public transport aircraft;
  - (d) when an aircraft is being employed in private operations, it shall be classified as a private aircraft.
- (7) For the purposes of these Regulations:
- (a) an aircraft that is flying or operating for a commercial purpose referred to in paragraph 206(1)(a) shall be taken to be employed in aerial work operations;
  - (b) an aircraft that is flying or operating for a commercial purpose referred to in paragraph 206(1)(b) shall be taken to be employed in charter operations;
  - (c) an aircraft that is flying or operating for the commercial purpose referred to in paragraph 206(1)(c) shall be taken to be employed in regular public transport operations; and
  - (d) an aircraft that is flying or operating for the purpose of, or in the course of:
    - (i) the personal transportation of the owner of the aircraft;

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- (ii) aerial spotting where no remuneration is received by the pilot or the owner of the aircraft or by any person or organisation on whose behalf the spotting is conducted;
  - (iii) agricultural operations on land owned and occupied by the owner of the aircraft;
  - (iv) aerial photography where no remuneration is received by the pilot or the owner of the aircraft or by any person or organisation on whose behalf the photography is conducted;
  - (v) the carriage of persons or the carriage of goods without a charge for the carriage being made other than the carriage, for the purposes of trade, of goods being the property of the pilot, the owner or the hirer of the aircraft;
  - (va) the carriage of persons in accordance with subregulation (7A);
  - (vi) the carriage of goods otherwise than for the purposes of trade;
  - (vii) flight training, other than the following:
    - (A) Part 141 flight training (within the meaning of regulation 141.015 of CASR);
    - (B) Part 142 flight training (within the meaning of regulation 142.015 of CASR);
    - (C) balloon flying training (within the meaning of subregulation 5.01(1)) for the grant of a balloon flight crew licence or rating; or
  - (viii) any other activity of a kind substantially similar to any of those specified in subparagraphs (i) to (vi) (inclusive); shall be taken to be employed in private operations.
- (7A) An aircraft that carries persons on a flight, otherwise than in accordance with a fixed schedule between terminals, is employed in a private operation if:
- (a) public notice of the flight has not been given by any form of public advertisement or announcement; and
  - (b) the number of persons on the flight, including the operating crew, does not exceed 6; and
  - (c) no payment is made for the services of the operating crew; and
  - (d) the persons on the flight, including the operating crew, share equally in the costs of the flight; and
  - (e) no payment is required for a person on the flight other than a payment under paragraph (d).
- (7B) For these Regulations, an unmanned aircraft that is operating in accordance with Part 101 of CASR, or an approval granted by CASA under that Part, is employed in an aerial work operation.
- (8) For the purposes of these Regulations, civil air operations are divided into the classes of operations referred to in subregulation (7).
- (9) Any reference in these Regulations to the owner of an aircraft must, where under a contract of hire or charter agreement the control, maintenance and operation of the aircraft is vested in the hirer, be read as a reference to the hirer.

- (4) Subject to subregulation (5), a person may carry out maintenance on a class B aircraft in Australian territory if:
- (a) the person:
    - (i) holds:
      - (A) an aircraft engineer licence that permits him or her to perform maintenance certification for the maintenance; or
      - (B) an airworthiness authority or an aircraft welding authority covering the maintenance; and
    - (ii) either:
      - (A) holds a certificate of approval covering the maintenance; or
      - (B) is employed by, or working under an arrangement with, a person who holds a certificate of approval covering the maintenance; or
  - (b) except where the maintenance is specified in Schedule 7, the person:
    - (i) holds:
      - (A) an aircraft engineer licence that permits him or her to perform maintenance certification for the maintenance; or
      - (B) an airworthiness authority or an aircraft welding authority covering the maintenance; and
    - (ii) either:
      - (A) is not an employee; or
      - (B) is employed by a person mentioned in subparagraph (i); or
  - (c) the person carries out the maintenance under the supervision of a person who:
    - (i) holds an aircraft engineer licence that permits him or her to perform maintenance certification for the maintenance; and
    - (ii) is permitted by paragraph (a) or (b) to carry out the maintenance; or
  - (d) the following requirements are satisfied:
    - (i) the person is the holder of a pilot licence that is valid for the aircraft;
    - (ii) the maintenance is specified in Part 1 of Schedule 8;
    - (iii) the maintenance is carried out in accordance with any conditions prescribed by legislative instrument issued by CASA for the purposes of this subparagraph; or
  - (da) the following requirements are satisfied:
    - (i) the person is a category B1 licence holder or a category B2 licence holder;
    - (ii) the maintenance is specified in Part 1 of Schedule 8;
    - (iii) the maintenance is carried out in accordance with any conditions prescribed by legislative instrument issued by CASA for the purposes of this subparagraph; or
  - (db) for an aircraft that is a balloon—the following requirements are satisfied:
    - (i) the person is the holder of a commercial pilot (balloon) licence or a private pilot certificate (balloons) that is valid for the balloon;
    - (ii) the maintenance is specified in Part 2 of Schedule 8;

**Part 4A** Maintenance

**Division 5** Who may carry out maintenance

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- (iii) the maintenance is carried out in accordance with any conditions prescribed by legislative instrument issued by CASA for the purposes of this subparagraph; or
  - (dc) the following requirements are satisfied:
    - (i) the aircraft is of a type that has been manufactured in accordance with the requirements of, and accepted for use by, an armed force;
    - (ii) the maintenance is carried out under the supervision of a person who holds an airworthiness authority covering the maintenance; or
  - (dd) the following requirements are satisfied:
    - (i) the aircraft is an amateur-built aircraft, kit-built aircraft or a light sport aircraft;
    - (ii) the person is included in a class of persons prescribed by legislative instrument issued by CASA for the purposes of this subparagraph;
    - (iii) the maintenance is carried out in accordance with any conditions prescribed by legislative instrument issued by CASA for the purposes of this subparagraph; or
  - (e) the person is authorised by CASA under subregulation (6) to carry out the maintenance and the maintenance is carried out in accordance with any conditions subject to which the authorisation is given.
- (5) In spite of subregulations (3) and (4), a person may carry out maintenance on an aircraft component, or an aircraft material, if:
  - (a) the person is employed by, or working under an arrangement with, the holder of a certificate of approval that covers the maintenance; and
  - (b) in the case of maintenance that is either:
    - (i) an inspection using a non-destructive testing method; or
    - (ii) manual welding;the person is authorised by CASA under subregulation (6) to carry out the maintenance and the maintenance is carried out in accordance with any conditions subject to which the authorisation is given.
- (6) CASA may, in writing, authorise a person for the purposes of paragraph (3)(d) or (4)(e) or subregulation (5).
- (7) An authorised person may, in writing, authorise a person for the purposes of paragraph (3)(d).
- (8) An authorisation is subject to any conditions that:
  - (a) CASA or the authorised person, as the case may be, considers are necessary in the interests of the safety of air navigation; and
  - (b) are included in the authorisation.
- (10) For the purposes of this regulation, an aircraft welding authority covers maintenance of a particular kind if the authority is issued for the type of manual welding and the parent metal group that is appropriate to that kind of maintenance.

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the flight characteristics of the aircraft or the operating characteristics of any aircraft component, or of any system of aircraft components, installed in the aircraft; or

- (c) the person is aware that certain maintenance that has been carried out on the aircraft has not been certified, in accordance with regulation 42ZE or 42ZN, to have been completed; or
- (d) the person is aware that:
  - (i) information entered on the maintenance release is incorrect; or
  - (ii) the maintenance release does not contain all information that it is required by or under these Regulations to contain.

(13A) A person must not contravene subregulation (13).

Penalty:

- (a) if the person signs the maintenance release in contravention of paragraph (13)(a) or (b)—50 penalty units; or
- (b) if the person signs the maintenance release in contravention of paragraph (13)(c)—10 penalty units; or
- (c) if the person signs the maintenance release in contravention of paragraph (13)(d)—25 penalty units.

- (15) A direction given under this regulation does not have effect in relation to a person until it has been served on the person.
- (16) Where a maintenance release is issued under this regulation, or again commences to be in force by virtue of regulation 48, in respect of an aircraft, any other maintenance release in force in respect of the aircraft immediately before that issue or that commencement, as the case may be, ceases to be in force.
- (17) An offence against subregulation (11) or (11A) is an offence of strict liability.

Note: For *strict liability*, see section 6.1 of the *Criminal Code*.

### 43A Maintenance release to be available for inspection

- (1) CASA or an authorised person may, at all reasonable times, inspect a maintenance release, or a copy of a maintenance release, for an aircraft.
- (2) A person who has possession or custody of a maintenance release, or a copy of a maintenance release, must make it available for inspection by CASA or an authorised person at the request of CASA or the authorised person.

Penalty: 25 penalty units.

- (3) An offence against subregulation (2) is an offence of strict liability.

Note: For *strict liability*, see section 6.1 of the *Criminal Code*.

#### **43B Time-in-service to be recorded on maintenance release**

- (1) On the completion of flying operations on each day that an aircraft is flown, the owner, operator or pilot in command must record on the maintenance release the total time-in-service of the aircraft on the day.

Penalty: 25 penalty units.

- (2) An offence against subregulation (1) is an offence of strict liability.

Note: For *strict liability*, see section 6.1 of the *Criminal Code*.

#### **44 Conditions with respect to maintenance releases**

- (1) CASA may, for the purpose of ensuring the safety of air navigation, give a direction that a condition set out in the direction shall apply in relation to:
  - (a) every maintenance release in force on or after the date of the direction;
  - (b) every maintenance release in respect of an aircraft of a kind specified in the direction in force on or after the date of the direction; or
  - (c) a maintenance release in respect of a specified aircraft.
- (1A) CASA may, for the purpose of ensuring the safety of air navigation, give directions requiring the endorsement of information on maintenance releases.
- (1B) It is a condition of a maintenance release that any applicable directions under subregulation (1A) are complied with.
- (2) A direction given under this regulation does not have effect in relation to a person until it has been served on the person.
- (3) A person who contravenes a direction given under this regulation is guilty of an offence punishable, on conviction, by:
  - (a) in the case of a direction under subregulation (1)—a fine not exceeding 50 penalty units; and
  - (b) in the case of a direction under subregulation (1A)—a fine not exceeding 25 penalty units.
- (4) An offence against subregulation (3) is an offence of strict liability.

Note: For *strict liability*, see section 6.1 of the *Criminal Code*.

#### **45 Suspension or cancellation of maintenance release**

- (1) Where CASA is satisfied that a condition set out in, or applying in relation to, a maintenance release has not been complied with, CASA may suspend or cancel the maintenance release.
- (2) A suspension or cancellation of a maintenance release under this regulation does not have effect in relation to a person until a notification of the suspension or cancellation has been served on the person.

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### 46 Information to be passed to other persons

- (1) If a direction setting out a condition that applies in relation to a maintenance release of an aircraft given under regulation 44, or a notification of a suspension or cancellation of a maintenance release of an aircraft given under regulation 45, has been served on the holder of the certificate of registration for the aircraft, the holder must use his or her best endeavours to ensure that the direction or the fact that the maintenance release has been suspended or cancelled, as the case may be, is brought to the attention of any person, who is likely to fly, or likely to issue a maintenance release for, the aircraft.

Penalty: 25 penalty units.

- (2) An offence against subregulation (1) is an offence of strict liability.

Note: For *strict liability*, see section 6.1 of the *Criminal Code*.

### 47 Maintenance release to cease to be in force

- (1) If:
- (aa) the holder of the certificate of registration for; or
  - (ab) the operator of; or
  - (ac) a flight crew member of; or
  - (ad) an authorised person engaged (whether as an employee or on his or her own behalf) in the maintenance of;
- an aircraft in respect of which a maintenance release is in force becomes aware:
- (a) that:
    - (i) a requirement or condition imposed under these Regulations in respect of the maintenance of the aircraft has not been complied with;
    - (ii) the aircraft has developed a defect that is major damage or a major defect and that is not a permissible unserviceability;
    - (iii) abnormal flight or ground loads have been imposed on the aircraft; or
    - (iv) maintenance carried out on the aircraft may have adversely affected, to such an extent as to affect the safety of the aircraft, the flight characteristics of the aircraft or the operating characteristics of any aircraft component, or any system of aircraft components, installed in the aircraft; and
  - (b) that there is a likelihood that the aircraft will be flown before:
    - (i) the requirement or condition referred to in subparagraph (a)(i) has been complied with;
    - (ii) the defect referred to in subparagraph (a)(ii) has been remedied;
    - (iii) any damage caused by the imposition of the abnormal loads referred to in subparagraph (a)(iii) has been remedied; or
    - (iv) the characteristics referred to in subparagraph (a)(iv) have been corrected;
- as the case may be;
- he or she shall enter on the maintenance release, or other document approved for use as an alternative to the maintenance release for the purposes of this

subregulation, an endorsement signed by him or her setting out the facts of the situation and stating that the aircraft is unairworthy, and thereupon the maintenance release ceases to be in force.

Penalty: 25 penalty units.

- (1A) For subregulation (1), damage to an aircraft is taken not to be major damage if advice has been given under regulation 21.007A of CASR that the damage is not major damage.
- (1B) For subregulation (1), damage to a limited category aircraft is taken not to be major damage if advice has been given under regulation 132.175 of CASR that the damage is not major damage.
- (1C) For subregulation (1), a defect in a limited category aircraft is taken not to be a major defect if advice has been given under regulation 132.175 of CASR that the defect is not a major defect.

(3) If:

- (a) the holder of the certificate of registration for; or
- (b) the operator of; or
- (c) the pilot in command of; or
- (d) an authorised person engaged (whether as an employee or on his or her own behalf) in the maintenance of;

an aircraft in respect of which a maintenance release is in force becomes aware that the certificate of airworthiness in respect of the aircraft has been suspended or cancelled, he or she shall enter on the maintenance release an endorsement signed by him or her setting out the facts of the situation and stating that the aircraft is unairworthy, and thereupon the maintenance release ceases to be in force.

Penalty: 25 penalty units.

- (5) A maintenance release for an aircraft stops being in force when a maintenance release inspection of the aircraft begins.
- (6) In this regulation, ***maintenance release inspection*** means an inspection carried out on an aircraft for the purpose of determining whether a maintenance release for the aircraft should be issued.

#### **48 Maintenance release to recommence to be in force**

- (1) Where a maintenance release in respect of an aircraft ceases to be in force by virtue of an endorsement made under subregulation 47(1), the maintenance release shall again commence to be in force if:
  - (a) where the endorsement refers to a requirement or condition in respect of the maintenance of the aircraft not having been complied with—there is entered on the maintenance release or other document on which the endorsement was made a certification, in accordance with regulation 42ZE

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**138 Pilot to comply with requirements etc of aircraft's flight manual etc**

- (1) If a flight manual has been issued for an Australian aircraft, the pilot in command of the aircraft must comply with a requirement, instruction, procedure or limitation concerning the operation of the aircraft that is set out in the manual.

Penalty: 50 penalty units.

- (2) If a flight manual has not been issued for an Australian aircraft and, under the relevant airworthiness standards for the aircraft, the information and instructions that would otherwise be contained in an aircraft's flight manual are to be displayed either wholly on a placard, or partly on a placard and partly in another document, the pilot in command of the aircraft must comply with a requirement, instruction, procedure or limitation concerning the operation of the aircraft that is set out:

- (a) on the placard; or
- (b) on the placard or in the other document.

Penalty: 50 penalty units.

- (3) An offence against subregulation (1) or (2) is an offence of strict liability.

Note: For *strict liability*, see section 6.1 of the *Criminal Code*.

**139 Documents to be carried in Australian aircraft**

- (1) Subject to subregulation (2), the pilot in command of an aircraft, when flying, must carry on the aircraft:
- (a) its certificate of registration;
  - (b) its certificate of airworthiness;
  - (c) if Part 42 of CASR does not apply to the aircraft—unless CASA otherwise approves, its maintenance release and any other document approved for use as an alternative to the maintenance release for the purposes of a provision of these Regulations;
  - (d) unless CASA otherwise approves, the licences and medical certificates of the operating crew;
  - (e) the flight manual (if any) for the aircraft;
  - (f) any licence in force with respect to the radio equipment in the aircraft;
  - (g) if the aircraft is carrying passengers—a list of the names, places of embarkation and places of destination of the passengers;
  - (h) if the aircraft is carrying cargo—the bills of lading and manifests with respect to the cargo.

Penalty: 10 penalty units.

- (2) An aircraft operating wholly within Australian territory is not required, when flying, to carry a document specified in paragraph (1)(a), (b), (f) or (g).
- (3) An aircraft that is operated under an AOC need not carry its flight manual when flying if it carries on board an operations manual that:

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- (a) contains the information and instructions that are required, under the relevant airworthiness standards for the aircraft, to be included in the flight manual; and
- (b) does not contain anything that conflicts with the information or instructions.

- (4) An offence against subregulation (1) is an offence of strict liability.

Note: For *strict liability*, see section 6.1 of the *Criminal Code*.

- (5) Subregulation (1) does not apply to the pilot in command if the flight was authorised by a special flight permit issued under regulation 21.197 of CASR.

Note: A defendant bears an evidential burden in relation to the matters in subregulation (5) (see subsection 13.3(3) of the *Criminal Code*).

## 140 Prohibited, restricted and danger areas

- (4) The pilot in command of an aircraft must not fly the aircraft over a prohibited area.

Penalty: 25 penalty units.

- (5) The pilot in command of an aircraft must not fly the aircraft over a restricted area if the flight is not in accordance with conditions specified in the notice declaring the area to be a restricted area.

Penalty: 25 penalty units.

- (6) If the pilot in command of an aircraft finds that the aircraft is over a prohibited area or a restricted area in contravention of subregulation (4) or (5), the pilot must:

- (a) immediately have the aircraft flown to a position where it is not over the area; and
- (b) when the aircraft reaches a position where it is not over the area, report the circumstances to air traffic control; and
- (c) land at such aerodrome as is designated by air traffic control and, for that purpose, obey any instructions given by air traffic control as to the movement of the aircraft.

Penalty: 25 penalty units.

- (7) An offence against subregulation (4), (5) or (6) is an offence of strict liability.

Note: For *strict liability*, see section 6.1 of the *Criminal Code*.

## 143 Carriage of firearms

- (1) A person, including a flight crew member, must not carry a firearm in, or have a firearm in his or her possession in, an aircraft other than an aircraft engaged in charter operations or regular public transport operations.

Penalty: 10 penalty units.

- (2) An offence against subregulation (1) is an offence of strict liability.

Note: For *strict liability*, see section 6.1 of the *Criminal Code*.

- (3) It is a defence to a prosecution under subregulation (1) if the person had the written permission of CASA to have the firearm in the aircraft.

Note: A defendant bears an evidential burden in relation to the matter in subregulation (3) (see subsection 13.3(3) of the *Criminal Code*).

#### **144 Discharge of firearms in or from an aircraft**

- (1) A person, including a flight crew member, must not discharge a firearm while on board an aircraft.

Penalty: 50 penalty units.

- (2) An offence against subregulation (1) is an offence of strict liability.

Note: For *strict liability*, see section 6.1 of the *Criminal Code*.

- (3) It is a defence to a prosecution under subregulation (1) if:

- (a) the person had the written permission of CASA to discharge the firearm while on board the aircraft; and
- (b) the firearm was discharged in accordance with the conditions (if any) specified in the permission.

- (4) It is a defence to a prosecution under subregulation (1) if the person's discharge of the firearm was authorised under regulation 4.59A of the *Aviation Transport Security Regulations 2005*.

Note 1: Regulation 4.59A of the *Aviation Transport Security Regulations 2005* deals with air security officers using weapons on board aircraft to safeguard against unlawful interference with aviation.

Note 2: A defendant bears an evidential burden in relation to the matters in subregulations (3) and (4) (see subsection 13.3(3) of the *Criminal Code*).

#### **145 Emergency authority**

In conforming with the rules contained in the provisions of Division 2 of this Part and in the provisions of Parts 12 and 13, the pilot in command of an aircraft shall pay due regard to all dangers of navigation and collision and to any special circumstances which may render a departure from those rules necessary in order to avoid immediate danger.

#### **146 Liability as to neglect of rules regarding lights etc**

Nothing in the rules contained in the provisions of Division 2 of this Part and in the provisions of Parts 12 and 13 shall exonerate any aircraft or the owner or hirer or pilot in command or crew thereof from the consequence of any neglect in the use of lights and signals, of any neglect to keep a proper lookout, or of the neglect of any precaution required by the ordinary practice of the air or the special circumstances of the case.

## Division 2—Flight rules

### 149 Towing

- (1) The pilot in command of an aircraft commits an offence if:
  - (a) he or she permits anything to be towed by the aircraft; and
  - (b) the requirement mentioned in subregulation (1A) is not met.

Penalty: 50 penalty units.

- (1A) For paragraph (1)(b), the requirement is that the towing must be:
  - (a) permitted by this regulation; or
  - (b) authorised under Part 61 of CASR.
- (2) Nothing in this regulation shall prevent the reasonable use or display from an aircraft in flight of radio aerials, or any signal apparatus, equipment or article required or permitted to be displayed or used by or from an aircraft in flight in accordance with the rules contained in the provisions of this Division and in the provisions of Parts 12 and 13.
- (3) Instruments for experimental purposes may be towed if the prior approval of CASA has been given.
- (4) An offence against subregulation (1) is an offence of strict liability.

Note: For *strict liability*, see section 6.1 of the *Criminal Code*.
- (5) It is a defence to a prosecution under subregulation (1) if:
  - (a) the pilot in command had the written permission of CASA for the towing; and
  - (b) the towing was done in accordance with the directions (if any) specified in the permission.

Note: A defendant bears an evidential burden in relation to the matters in subregulation (5) (see subsection 13.3(3) of the *Criminal Code*).

### 150 Dropping of articles

- (1) Subject to this regulation, the pilot in command of an aircraft in flight shall not permit anything to be dropped from the aircraft.

Penalty: 25 penalty units.

- (1A) An offence against subregulation (1) is an offence of strict liability.

Note: For *strict liability*, see section 6.1 of the *Criminal Code*.
- (2) Nothing in this regulation shall prevent:
  - (a) the dropping of packages or other articles or substances:
    - (i) in the course of agricultural operations; or
    - (ii) in the course of cloud seeding operations; or

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- (iii) in the course of firefighting operations; or
- (iv) to initiate controlled burning; or
- (v) in the course of search and rescue operations; or
- (vi) to deliver emergency medical supplies; or
- (vii) to deliver emergency food supplies; or
- (viii) in the course of other operations;  
in accordance with directions issued by CASA:
- (ix) to ensure the safety of the aircraft as far as practicable; and
- (x) to minimise hazard to persons, animals or property;
- (b) the dropping of ballast in the form of fine sand or water;
- (c) the use of apparatus solely for the purpose of navigating an aircraft where the approval of CASA to the type of apparatus and the method of use has previously been notified; or
- (d) in an emergency, the jettisoning of liquid fuel or cargo over areas where hazard to persons or property on the ground or water is not created.

### 151 Picking up of persons or objects

- (1) The pilot in command of an aircraft in flight must not allow persons or objects to be picked up by the aircraft.

Penalty: 25 penalty units.

- (2) An offence against subregulation (1) is an offence of strict liability.

Note: For *strict liability*, see section 6.1 of the *Criminal Code*.

- (3) It is a defence to a prosecution under subregulation (1) if:

- (a) CASA gave prior written authority for the person or object to be picked up while the aircraft was in flight; and
- (b) the person or object was picked up in accordance with the conditions (if any) specified in the authority.

Note: A defendant bears an evidential burden in relation to the matters in subregulation (3) (see subsection 13.3(3) of the *Criminal Code*).

### 152 Parachute descents

- (1) A person must not make a parachute descent if the descent is not:
- (a) authorised in writing by CASA; and
  - (b) conducted in accordance with the written specifications of CASA.

Penalty: 25 penalty units.

- (2) An offence against subregulation (1) is an offence of strict liability.

Note: For *strict liability*, see section 6.1 of the *Criminal Code*.

- (3) It is a defence to a prosecution under subregulation (1) if the parachute descent was a necessary emergency descent.

Note: A defendant bears an evidential burden in relation to the matter in subregulation (3) (see subsection 13.3(3) of the *Criminal Code*).

### **153 Flight under simulated instrument flying conditions**

- (1) The pilot must not fly an aircraft under simulated instrument flying conditions if each of the following requirements is not satisfied:
- (a) fully functioning dual controls are installed in the aircraft;
  - (b) a competent pilot occupies a control seat to act as safety pilot for the person who is flying under simulated instrument conditions and:
    - (i) the safety pilot has adequate vision forward and to each side of the aircraft; or
    - (ii) if the safety pilot's field of vision is limited, a competent observer in communication with the safety pilot occupies a position in the aircraft from which his or her field of vision supplements that of the safety pilot.

Penalty: 25 penalty units.

- (2) An offence against subregulation (1) is an offence of strict liability.

Note: For *strict liability*, see section 6.1 of the *Criminal Code*.

### **155 Aerobatic manoeuvres**

- (1) The pilot in command of an aircraft commits an offence if the pilot conducts an aerobatic manoeuvre at night.

Penalty: 25 penalty units.

- (2) The pilot in command of an aircraft commits an offence if the pilot conducts an aerobatic manoeuvre that is not in VMC.

Penalty: 25 penalty units.

- (3) The pilot in command of an aircraft commits an offence if:
- (a) the pilot conducts a particular kind of aerobatic manoeuvre; and
  - (b) neither of the following state that the aircraft may perform that kind of aerobatic manoeuvre:
    - (i) the aircraft's certificate of airworthiness;
    - (ii) the aircraft's flight manual.

Penalty: 25 penalty units.

- (4) A person commits an offence if:
- (a) the person conducts an aerobatic manoeuvre over a populous area or public gathering; and
  - (b) the person does not have CASA's written permission to do so.

Penalty: 25 penalty units.

- (5) The pilot in command of an aircraft commits an offence if:
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- (a) the pilot conducts an aerobatic manoeuvre; and
- (b) the pilot does not, before conducting the aerobatic manoeuvre, take any action that is necessary to ensure that each of the following requirements are met:
  - (i) any loose articles must be removed from the aircraft or made secure in the aircraft;
  - (ii) all locker and compartment doors of the aircraft must be fastened;
  - (iii) the safety harness or seat belt of any vacant seat must be made secure so as to avoid the fouling of the controls of the aircraft;
  - (iv) the dual controls (if any) of the aircraft must be removed from the aircraft or rendered inoperative, unless the control seats are occupied in accordance with regulation 226 or the dual control seat is vacant;
  - (v) every person in the aircraft must be secured with a correctly adjusted safety harness or seat belt.

Penalty: 25 penalty units.

- (6) An offence against this regulation is an offence of strict liability.

### 156 Flying over public gatherings

- (1) The pilot in command of an aircraft must not fly the aircraft over a public gathering if:
  - (a) the pilot does not have the written permission of CASA for the flight; and
  - (b) the flight is not in accordance with the conditions specified in the permit.

Penalty: 10 penalty units.

- (1A) An offence against subregulation (1) is an offence of strict liability.

Note: For *strict liability*, see section 6.1 of the *Criminal Code*.

- (2) Nothing in subregulation (1) shall apply to an aircraft passing over a public gathering in the process of:
  - (a) arriving at or departing from an aerodrome in the course of its normal navigation for so doing; or
  - (b) passing from place to place in the ordinary course of navigation.

### 157 Low flying

- (1) The pilot in command of an aircraft must not fly the aircraft over:
  - (a) any city, town or populous area at a height lower than 1,000 feet; or
  - (b) any other area at a height lower than 500 feet.

Penalty: 50 penalty units.

- (2) An offence against subregulation (1) is an offence of strict liability.

Note: For *strict liability*, see section 6.1 of the *Criminal Code*.

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- (3) A height specified in subregulation (1) is the height above the highest point of the terrain, and any object on it, within a radius of:
- (a) in the case of an aircraft other than a helicopter—600 metres; or
  - (b) in the case of a helicopter—300 metres;
- from a point on the terrain vertically below the aircraft.
- (3A) Paragraph (1)(a) does not apply in respect of a helicopter flying at a designated altitude within an access lane details of which have been published in the AIP or NOTAMS for use by helicopters arriving at or departing from a specified place.
- (4) Subregulation (1) does not apply if:
- (a) through stress of weather or any other unavoidable cause it is essential that a lower height be maintained; or
  - (b) the aircraft is engaged in private operations or aerial work operations, being operations that require low flying, and the owner or operator of the aircraft has received from CASA either a general permit for all flights or a specific permit for the particular flight to be made at a lower height while engaged in such operations; or
  - (c) the pilot of the aircraft is receiving flight training in low-level operations or aerial application operations, within the meaning of Part 61 of CASR; or
  - (d) the pilot of the aircraft is engaged in a baulked approach procedure, or the practice of such procedure under the supervision of a flight instructor or a check pilot; or
  - (e) the aircraft is flying in the course of actually taking-off or landing at an aerodrome; or
  - (f) the pilot of the aircraft is engaged in:
    - (i) a search; or
    - (ii) a rescue; or
    - (iii) dropping supplies;in a search and rescue operation; or
  - (g) the aircraft is a helicopter:
    - (i) operated by, or for the purposes of, the Australian Federal Police or the police force of a State or Territory; and
    - (ii) engaged in law enforcement operations; or
  - (h) the pilot of the aircraft is engaged in an operation which requires the dropping of packages or other articles or substances in accordance with directions issued by CASA.

### **158 Reports at designated points or intervals**

- (1) If radio apparatus is fitted to an aircraft, and a Flight Plan has been submitted in respect of the flight, the time and altitude of passing each reporting point designated by air traffic control, together with any other required information, shall be reported by the pilot in command by radio as soon as possible to air traffic control, and, in the absence of designated reporting points, position reports shall be made at intervals specified by air traffic control.

## Part 12—Rules of the air

### Division 1—General

#### 160 Interpretation

In this Division, an *overtaking aircraft* means an aircraft that approaches another aircraft from the rear on a line forming an angle of less than 70 degrees with the plane of symmetry of the latter, that is to say, an aircraft that is in such a position with reference to another aircraft that at night it would be unable to see either of the forward navigation lights of the other aircraft.

#### 161 Right of way

- (1) An aircraft that is required by the rules in this Division to keep out of the way of another aircraft shall avoid passing over or under the other, or crossing ahead of it, unless passing well clear.
- (2) The pilot in command of an aircraft that has the right of way must maintain its heading and speed, but nothing in the rules in this Division shall relieve the pilot in command of an aircraft from the responsibility of taking such action as will best avert collision.

Penalty: 25 penalty units.

- (3) An offence against subregulation (2) is an offence of strict liability.

Note: For *strict liability*, see section 6.1 of the *Criminal Code*.

#### 162 Rules for prevention of collision

- (1) When 2 aircraft are on converging headings at approximately the same height, the aircraft that has the other on its right shall give way, except that:
  - (a) power-driven heavier-than-air aircraft shall give way to airships, gliders and balloons;
  - (b) airships shall give way to gliders and balloons;
  - (c) gliders shall give way to balloons; and
  - (d) power-driven aircraft shall give way to aircraft that are seen to be towing other aircraft or objects.
- (2) When two aircraft are approaching head-on or approximately so and there is danger of collision, each shall alter its heading to the right.
- (3) An aircraft that is being overtaken has the right-of-way and the overtaking aircraft, whether climbing, descending, or in horizontal flight, shall keep out of the way of the other aircraft by altering its heading to the right, and no subsequent change in the relative positions of the two aircraft shall absolve the overtaking aircraft from this obligation until it is entirely past and clear.

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- (4) An overtaking aircraft shall not pass the aircraft that it is overtaking by diving or climbing.
- (5) An aircraft in flight, or operating on the ground or water, shall give way to other aircraft landing or on final approach to land.
- (6) When two or more heavier-than-air aircraft are approaching an aerodrome for the purpose of landing, aircraft at the greater height shall give way to aircraft at the lesser height, but the latter shall not take advantage of this rule to cut-in in front of another that is on final approach to land, or overtake that aircraft.
- (7) Notwithstanding anything contained in subregulation (6), power-driven heavier-than-air aircraft shall give way to gliders.
- (8) An aircraft that is about to take-off shall not attempt to do so until there is no apparent risk of collision with other aircraft.
- (9) The pilot in command of an aircraft must give way to another aircraft that is compelled to land.

Penalty: 25 penalty units.

- (10) The pilot in command of an aircraft must comply with the rules in subregulations (1) to (8).

Penalty: 25 penalty units.

- (11) An offence against subregulation (10) is an offence of strict liability.

Note: For *strict liability*, see section 6.1 of the *Criminal Code*.

### 163 Operating near other aircraft

- (1) The pilot in command of an aircraft must not fly the aircraft so close to another aircraft as to create a collision hazard.

Penalty: 50 penalty units.

- (2) The pilot in command of an aircraft must not operate the aircraft on the ground in such a manner as to create a hazard to itself or to another aircraft.

Penalty: 50 penalty units.

- (3) An offence against subregulation (1) or (2) is an offence of strict liability.

Note: For *strict liability*, see section 6.1 of the *Criminal Code*.

### 163AA Formation flying

- (1) A pilot must not fly an aircraft in formation if each of the following requirements is not satisfied:

- (a) each of the pilots in command is authorised, under Part 61 of CASR, to fly in formation;
- (b) the formation is pre-arranged between the pilots in command;

- (c) the formation flight is conducted either:
  - (i) under the Visual Flight Rules by day; or
  - (ii) under an approval given by CASA.

Penalty: 50 penalty units.

(1A) An offence against subregulation (1) is an offence of strict liability.

Note: For *strict liability*, see section 6.1 of the *Criminal Code*.

### **163A Responsibility of flight crew to see and avoid aircraft**

When weather conditions permit, the flight crew of an aircraft must, regardless of whether an operation is conducted under the Instrument Flight Rules or the Visual Flight Rules, maintain vigilance so as to see, and avoid, other aircraft.

## Division 2—Operation on and in the vicinity of aerodromes

### Subdivision 1—General

#### 164 Responsibility for compliance with rules of this Division

When operating an aircraft on or in the vicinity of an aerodrome the pilot in command shall be responsible for compliance by the aircraft with the rules contained in this Division.

#### 165 Temporary suspension of rules

CASA may, in respect of any specified aerodrome, temporarily suspend, either wholly or in part, the application of the rules contained in this Division.

### Subdivision 2—Operating on and in the vicinity of non-controlled aerodromes

#### 166 Definitions for Subdivision 2

- (1) In this Subdivision:

*in the vicinity of*, in relation to a non-controlled aerodrome, has the meaning given by subregulation (2).

*radiotelephone qualification* includes a certificate, relating to the operation of radiotelephone equipment, issued by any of the following organisations in accordance with the organisation's operations manual:

- (a) Australian Ballooning Federation Incorporated;
- (b) Australian Sport Rotorcraft Association Incorporated;
- (c) The Gliding Federation of Australia Incorporated;
- (d) Hang Gliding Federation of Australia Incorporated;
- (e) Recreational Aviation Australia Incorporated.

- (2) An aircraft is *in the vicinity of* a non-controlled aerodrome if it is within:

- (a) airspace other than controlled airspace; and
- (b) 10 miles from the aerodrome; and
- (c) a height above the aerodrome that could result in conflict with operations at the aerodrome.

- (3) For paragraphs (2)(b) and (c), if an aerodrome reference point for the aerodrome is published in the AIP, the distance or height must be measured from that point.

#### 166A General requirements for aircraft on the manoeuvring area or in the vicinity of a non-controlled aerodrome

- (1) The pilot in command of an aircraft commits an offence if:

- (a) the aircraft is being operated on the manoeuvring area of, or in the vicinity of, a non-controlled aerodrome; and
- (b) the pilot engages in conduct; and
- (c) the conduct results in the contravention of a rule set out in subregulation (2).

Penalty: 25 penalty units.

- (2) The rules are the following:
    - (a) the pilot must maintain a lookout for other aircraft that are being operated on the manoeuvring area of, or in the vicinity of, the aerodrome to avoid collision;
    - (b) the pilot must ensure that the aircraft does not cause a danger to other aircraft that are being operated on the manoeuvring area of, or in the vicinity of, the aerodrome;
    - (c) if the pilot is flying in the vicinity of the aerodrome, the pilot must:
      - (i) join the circuit pattern for the aerodrome; or
      - (ii) avoid the circuit pattern for the aerodrome;
    - (d) if the pilot joins the circuit pattern for the aerodrome for a landing at the aerodrome, the pilot must, after joining the circuit pattern, make all turns in accordance with subregulation (3);
    - (e) if the pilot takes off from the aerodrome, the pilot must, after taking off, make all turns in accordance with subregulation (3) while the aircraft is flying in the circuit pattern for the aerodrome;
    - (f) subject to subregulation (4), if the pilot takes off from the aerodrome, the pilot must maintain the same track from the take-off until the aircraft is 500 feet above the terrain;
    - (g) the pilot must not:
      - (i) take off from a part of the aerodrome that is outside the landing area of the aerodrome; or
      - (ii) land the aircraft on a part of the aerodrome that is outside the landing area of the aerodrome;
    - (h) if the pilot takes off from, or lands at, the aerodrome, the pilot must take off or land into the wind if, at the time of the take-off or landing:
      - (i) the pilot is not permitted under subregulation (5) to take off or land downwind; and
      - (ii) it is practicable to take off or land into the wind.
  - (3) For paragraphs (2)(d) and (e), the turns must be made:
    - (a) if CASA has, under subregulation 92(2), directed that all turns at the aerodrome be made in a particular direction—in accordance with CASA's directions; or
    - (b) if paragraph (a) does not apply and visual signals are displayed at the aerodrome indicating a direction to make all turns—in accordance with the visual signals; or
    - (c) in any other case—to the pilot's left.
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**Part 12** Rules of the air

**Division 2** Operation on and in the vicinity of aerodromes

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Note: Directions under subregulation 92(2) are published in the AIP.

- (4) The rule in paragraph (2)(f) does not apply if a change to the track is necessary to avoid the terrain.
- (5) For subparagraph (2)(h)(i), the pilot in command of an aircraft may take off or land downwind at a non-controlled aerodrome if:
  - (a) the aircraft's flight manual allows the aircraft to take off or land downwind; and
  - (b) after considering any other aircraft that are being operated on the manoeuvring area of, or in the vicinity of, the aerodrome, the pilot believes that it is safe to do so.
- (6) An offence against subregulation (1) in relation to any of paragraphs (2)(a) to (g) is an offence of strict liability.

Note: The pilot in command of an aircraft must comply with the flight manual, or other equivalent document for the aircraft, as required by regulation 138.

**166B Carrying out a straight-in approach**

- (1) The pilot in command of an aircraft commits an offence if:
  - (a) the pilot carries out a straight-in approach to land at a non-controlled aerodrome; and
  - (b) the pilot engages in conduct; and
  - (c) the conduct results in the contravention of a rule set out in subregulation (2).

Penalty: 25 penalty units.

- (2) The rules are the following:
  - (a) before starting the approach, the pilot must determine:
    - (i) the wind direction at the aerodrome; and
    - (ii) the runways in use at the aerodrome;
  - (b) the pilot must give way to any other aircraft flying in the circuit pattern for the aerodrome;
  - (c) subject to subregulation (3), the pilot must carry out all manoeuvring, to establish the aircraft on final approach, at least 3 miles from the threshold of the runway that the pilot intends to use for landing.
- (3) The rule in paragraph (2)(c) does not apply to the pilot if he or she is carrying out the approach:
  - (a) using an instrument approach procedure; and
  - (b) in IMC.
- (4) An offence against subregulation (1) in relation to paragraph (2)(a) or (b) is an offence of strict liability.

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- (3) When determining applicable distances, CASA may do so by reference to a class of airspace.
- (4) In spite of subregulation (2), the pilot in command of an aircraft may conduct a special V.F.R. flight if:
  - (a) air traffic control gives permission for the flight; and
  - (b) the flight is conducted in accordance with any conditions to which the permission is subject.
- (5) In this regulation:

***special V.F.R. flight*** means a V.F.R. flight:

- (a) conducted in a control zone; or
- (b) conducted in a control area next to a control zone for the purpose of entering or leaving the zone;

when the flight visibility or distances from cloud are less than the applicable distances determined under subregulation (2).

### 173 Cruising level to be appropriate to magnetic track

- (1) When a V.F.R. flight is conducted at a height of 5,000 feet or more above mean sea level, the pilot in command must, subject to any contrary air traffic control instructions, ensure that the cruising level of the aircraft is appropriate to its magnetic track.

Penalty: 25 penalty units.

- (2) When a V.F.R. flight is conducted at a height less than 5,000 feet above mean sea level, the pilot in command must, subject to any contrary air traffic control instructions, ensure that the cruising level of the aircraft is, whenever practicable, appropriate to its magnetic track.

Penalty: 25 penalty units.

- (2A) CASA must notify in AIP or NOTAMS the cruising levels appropriate to an aircraft's magnetic track.
- (3) The pilot in command of an aircraft must not conduct a V.F.R. flight at a height above flight level 200 if the pilot does not have CASA's approval to conduct the flight at a height above that level.

Penalty: 25 penalty units.

- (4) An offence against subregulation (1), (2) or (3) is an offence of strict liability.

Note: For ***strict liability***, see section 6.1 of the *Criminal Code*.

### 174 Determination of visibility for V.F.R. flights

- (1) Flight visibility shall be determined by the pilot in command from the cockpit of the aircraft while in flight.

- (3) Subject to regulation 257, the pilot in command of an aircraft operating under the Visual Flight Rules is responsible for determining the visibility for the take-off and landing of the aircraft.
- (4) In determining visibility for the purposes of this regulation, the pilot in command shall take into account the meteorological conditions, sun glare and any other condition that may limit his or her effective vision through his or her windscreen.

#### **174A Equipment of aircraft for V.F.R. flight**

- (1AA) This regulation does not apply in relation to an aircraft that is registered in New Zealand and is operated under a New Zealand AOC with ANZA privileges.
  - (1) CASA may issue instructions specifying:
    - (a) the radiocommunication systems; or
    - (b) the radio navigation systems; or
    - (c) the secondary surveillance radar transponder equipment;that must be carried on, or installed in, an aircraft before it undertakes a V.F.R. flight.
- (1A) Subject to subregulation (3), the pilot in command of an aircraft must not fly the aircraft under the V.F.R. if the aircraft is not equipped with:
  - (a) suitable flight instruments as directed by CASA; and
  - (b) the equipment specified in instructions issued under subregulation (1) in relation to the aircraft.

Penalty: 25 penalty units.

- (1B) If an instruction under subregulation (1) is not issued in the form of a Civil Aviation Order, the instruction does not bind a person until it has been:
  - (a) served on the person; or
  - (b) published in NOTAMS or AIP.
- (2) Subject to subregulation (4), the pilot in command of an aircraft must not fly the aircraft under the V.F.R. at night if, in addition to the equipment referred to in subregulation (1A), it is not also equipped with:
  - (a) a landing light;
  - (b) illumination for all instruments and equipment used by the flight crew, being instruments and equipment that are essential for the safe operation of the aircraft;
  - (c) lights in all passenger compartments;
  - (d) an electric torch for each crew member; and
  - (e) such other equipment as CASA directs in the interests of safety.

Penalty: 25 penalty units.

- (3) In respect of an aircraft that is not equipped as referred to in subregulation (1A), CASA may give permission, subject to such conditions (if any) as are specified in the permission, for the aircraft to be flown under the V.F.R.

## Division 3—Emergency signals

### 191 Transmission of signals

- (1) The pilot in command of an aircraft shall transmit or display the signals specified in this Division according to the degree of emergency being experienced.
- (2) The signals specified in relation to each successive degree of emergency may be sent either separately or together for any one degree of emergency.
- (3) Nothing in the rules contained in this Division shall prevent the use by an aircraft in distress of any means at its disposal to attract attention or make known its position for the purpose of obtaining help.

### 192 Distress signals

- (1) The distress signal shall be transmitted only when the aircraft is threatened with grave and immediate danger and requires immediate assistance.
- (2) In radio telegraphy, the distress signal shall take the form of SOS (... — — —...), sent 3 times, followed by the group DE, sent once, and the call sign of the aircraft, sent 3 times.
- (3) The signal specified in subregulation (2) may be followed by the automatic alarm signal which consists of a series of 12 dashes, sent in one minute, the duration of each dash being 4 seconds, and the duration of the interval between consecutive dashes being one second.
- (4) In radiotelephony, the distress signal shall take the form of the word 'MAYDAY', pronounced 3 times, followed by the words 'THIS IS', followed by the call sign of the aircraft 3 times.
- (5) By other means the distress signal shall take one or more of the following forms:
  - (a) the Morse signal ... — — —... with visual apparatus or with sound apparatus;
  - (b) a succession of pyrotechnical lights, fired at short intervals, each showing a single red light;
  - (c) the two-flag signal corresponding to the letters NC of the International Code of Signals;
  - (d) the distant signal, consisting of a square flag having, either above or below, a ball or anything resembling a ball;
  - (e) a parachute flare showing a red light;
  - (f) a gun or other explosive signal fired at intervals of approximately one minute.

## Part 14—Air service operations

### Division 1A—AOCs with ANZA privileges

#### 205 Additional conditions—Australian AOC with ANZA privileges

- (1) For paragraph 28B(1)(e) of the Act, it is a condition for the issue of an Australian AOC with ANZA privileges that CASA must be satisfied that each aeroplane that the applicant proposes to operate under the AOC for ANZA activities in New Zealand complies with the requirements mentioned in subregulation (3).
- (2) For paragraph 28BA(1)(b) of the Act, it is a condition of an Australian AOC with ANZA privileges that each aeroplane operated by the AOC holder under the AOC for ANZA activities in New Zealand must comply with the requirements mentioned in subregulation (3).
- (3) For subregulations (1) and (2), the requirements are that the aeroplane must:
  - (a) either:
    - (i) have a maximum take-off weight of more than 15 000 kg; or
    - (ii) be permitted by its type certificate or foreign type certificate to have a passenger seating capacity of more than 30 seats; and
  - (b) be registered in Australia or New Zealand.

## **Division 1—General**

### **206 Commercial purposes (Act, s 27(9))**

- (1) For the purposes of subsection 27(9) of the Act, the following commercial purposes are prescribed:
- (a) aerial work purposes, being purposes of the following kinds (except when carried out by means of an RPA):
    - (i) aerial surveying;
    - (ii) aerial spotting;
    - (iii) agricultural operations;
    - (iv) aerial photography;
    - (v) advertising;
    - (vi) balloon flying training (within the meaning of subregulation 5.01(1)) for the grant of a balloon flight crew licence or rating;
    - (vii) ambulance functions;
    - (viii) carriage, for the purposes of trade, of goods being the property of the pilot, the owner or the hirer of the aircraft (not being a carriage of goods in accordance with fixed schedules to and from fixed terminals);
    - (ix) any other purpose that is substantially similar to any of those specified in subparagraphs (i) to (vii) (inclusive);
  - (b) charter purposes, being purposes of the following kinds:
    - (i) the carriage of passengers or cargo for hire or reward to or from any place, other than carriage in accordance with fixed schedules to and from fixed terminals;
    - (ii) the carriage, in accordance with fixed schedules to and from fixed terminals, of passengers or cargo or passengers and cargo in circumstances in which the accommodation in the aircraft is not available for use by persons generally;
  - (c) the purpose of transporting persons generally, or transporting cargo for persons generally, for hire or reward in accordance with fixed schedules to and from fixed terminals over specific routes with or without intermediate stopping places between terminals.
- (1A) However, the commercial purposes prescribed by subregulation (1) do not include:
- (a) for a limited category aircraft:
    - (i) the conduct of an adventure flight; or
    - (ii) practice in flying the aircraft conducted in support of a special purpose operation mentioned in the aircraft's limited category certificate; or
    - (iii) training conducted in support of a special purpose operation mentioned in the certificate; or

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- (b) carrying out an activity under paragraph 262AP(2)(c) (experimental aircraft—operating limitations).

**207 Requirements according to operations on which Australian aircraft used**

- (1) A person must not use an Australian aircraft in a class of operation if CASA has not authorised and approved the particular type of aircraft for that use.

Penalty: 50 penalty units.

- (2) A person must not use an Australian aircraft in a class of operation if the aircraft is not:

- (a) fitted with instruments; and  
(b) fitted with, or carrying, equipment, including emergency equipment; that CASA has approved and directed.

Penalty: 50 penalty units.

- (3) Where CASA approves or directs that an instrument or item of equipment be fitted or carried on an aircraft, a person must fit, carry or use the instrument or item of equipment on the aircraft only in accordance with the directions (if any) of CASA.

Penalty: 50 penalty units.

- (4) In giving an authorisation, approval or direction for the purposes of this regulation, CASA shall have regard only to the safety of air navigation.

- (5) An offence against subregulation (1), (2) or (3) is an offence of strict liability.

Note: For *strict liability*, see section 6.1 of the *Criminal Code*.

**208 Number of operating crew**

- (1) The operator of an Australian aircraft must ensure that the minimum operating crew of the aircraft is not less in number than that specified in the certificate of airworthiness of, or the flight manual for, the aircraft, and that it is supplemented by such additional operating crew members, having such qualifications, as CASA considers necessary and directs, having regard to the safety of air navigation.

Penalty: 50 penalty units.

- (2) An offence against subregulation (1) is an offence of strict liability.

Note: For *strict liability*, see section 6.1 of the *Criminal Code*.

**209 Private operations**

- (1) The operator and the pilot in command of an aircraft engaged in private operations shall comply with the provisions of these Regulations and such additional conditions as CASA from time to time directs in the interest of safety.

## **Division 3—Conduct of operations**

### **222A Division 3 not to apply to New Zealand AOC holders with ANZA privileges**

This Division does not apply in relation to an aircraft operated under a New Zealand AOC with ANZA privileges.

### **223 Operator to ensure employees and flight crew familiar with local laws and regulations**

- (1) An operator of an Australian aircraft engaged in air navigation outside Australian territory shall ensure that:
  - (a) his or her employees when abroad know that they must comply with the laws, regulations and procedures of the countries in which the aircraft is operated;
  - (b) the pilots of the aircraft are familiar with the regulations and procedures for the time being in force in the area in which the aircraft is operated, and, in particular, with such of those regulations and procedures as relate to the aerodromes and air navigation facilities to be used by the aircraft; and
  - (c) members of the flight crew, other than pilots, are familiar with such of the regulations and procedures of the countries in which the aircraft is operated as relate to the performance of their respective duties in the operation of the aircraft.

Penalty: 25 penalty units.

- (2) An offence against subregulation (1) is an offence of strict liability.

Note: For *strict liability*, see section 6.1 of the *Criminal Code*.

### **224 Pilot in command**

- (1) For each flight the operator shall designate one pilot to act as pilot in command.

Penalty: 5 penalty units.

- (1A) An offence against subregulation (1) is an offence of strict liability.

Note: For *strict liability*, see section 6.1 of the *Criminal Code*.

- (2) A pilot in command of an aircraft is responsible for:
  - (a) the start, continuation, diversion and end of a flight by the aircraft; and
  - (b) the operation and safety of the aircraft during flight time; and
  - (c) the safety of persons and cargo carried on the aircraft; and
  - (d) the conduct and safety of members of the crew on the aircraft.
- (2A) A pilot in command must discharge his or her responsibility under paragraph (2)(a) in accordance with:

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- (a) any information, instructions or directions, relating to the start, continuation, diversion or end of a flight, that are made available, or issued, under the Act or these Regulations; and
  - (b) if applicable, the operations manual provided by the operator of the aircraft.
- (3) The pilot in command shall have final authority as to the disposition of the aircraft while he or she is in command and for the maintenance of discipline by all persons on board.

### **224A Commercial operations carrying passengers—requirements if pilot in command 60 or more**

- (1) The operator and pilot in command of an Australian aircraft each commit an offence if:
- (a) a flight of the aircraft is a commercial operation; and
  - (b) a passenger is carried on the flight; and
  - (c) the pilot in command of the aircraft is at least 60; and
  - (d) the aircraft is an aircraft of a category mentioned in subregulation (2).

Penalty: 50 penalty units.

- (2) For paragraph (1)(d), the aircraft categories are the following:
- (a) an aeroplane;
  - (b) a helicopter;
  - (c) a powered-lift aircraft;
  - (d) a gyroplane;
  - (e) an airship.
- (3) Subregulation (1) does not apply if:
- (a) the aircraft:
    - (i) is fitted with fully functioning dual controls; and
    - (ii) has a flight crew that includes a qualified pilot for the aircraft who is not the pilot in command; or
  - (b) the pilot in command is successfully participating in an operator's training and checking system approved by CASA under regulation 217; or
  - (c) if the pilot in command is less than 65—the pilot in command has met the requirement mentioned in subregulation (4) within one year before the day of the flight; or
  - (d) if the pilot in command is at least 65—the pilot in command has met the requirement mentioned in subregulation (4) within 6 months before the day of the flight.

Note: A defendant bears an evidential burden in relation to the matters in subregulation (3): see subsection 13.3(3) of the *Criminal Code*.

- (4) For paragraphs (3)(c) and (d), the requirement is that the pilot in command has successfully completed an operator proficiency check or flight review in an

aircraft of the same category or an approved flight simulator for the category of aircraft.

- (5) An offence against this regulation is an offence of strict liability.
- (6) In this regulation:

**approved flight simulator:** see regulation 61.010 of CASR.

**category, of aircraft:** see regulation 61.010 of CASR.

**qualified pilot,** for a flight of an aircraft, means the holder of an air transport or commercial pilot licence who:

- (a) is authorised under Part 61 of CASR to pilot the aircraft; and
- (b) either:
- (i) is less than 60; or
  - (ii) meets the requirements of paragraph (3)(b), (c) or (d).

## 225 Pilots at controls

- (1) The pilot in command must ensure that 1 pilot is at the controls of an aircraft from the time at which the engine or engines is or are started prior to a flight until the engine or engines is or are stopped at the termination of a flight.

Penalty: 50 penalty units.

- (2) When, in accordance with these Regulations, 2 or more pilots are required to be on board an aircraft, the pilot in command must ensure that 2 pilots remain at the controls at all times when the aircraft is taking off, landing and during turbulent conditions in flight.

Penalty: 50 penalty units.

- (3) An offence against subregulation (1) or (2) is an offence of strict liability.

Note: For **strict liability**, see section 6.1 of the *Criminal Code*.

## 226 Dual controls

- (1) During flight, a person may occupy a control seat of an aircraft equipped with fully or partially functioning dual controls only if:
- (a) the person holds an appropriate pilot licence for the type of aircraft and the class of operations in which the aircraft is flown; or
  - (b) the person is a student pilot assigned for instruction in the aircraft; or
  - (c) the person is authorised by CASA.

Penalty: 25 penalty units.

- (2) In authorising a person to occupy a control seat in pursuance of subregulation (1), CASA may grant the authority subject to such conditions as CASA considers necessary in the interests of safety.

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- (3) A person authorised under paragraph (1)(b) must not contravene a condition subject to which the authority is granted.

Penalty: 25 penalty units.

- (4) An offence against subregulation (1) or (3) is an offence of strict liability.

Note: For *strict liability*, see section 6.1 of the *Criminal Code*.

### **227 Admission to crew compartment**

- (1) A person may enter the crew compartment of an aircraft during flight only if:
- (a) the person is a member of the operating crew of the aircraft; or
  - (b) the person is permitted by the pilot in command to enter that compartment.

Penalty: 50 penalty units.

- (1A) A member of the operating crew of an aircraft may permit a person to enter, or remain in, the crew compartment of an aircraft during flight only if:
- (a) the person is a member of the operating crew of the aircraft; or
  - (b) the person is permitted by the pilot in command to enter that compartment.

Penalty: 50 penalty units.

Note 1: Regulation 4.67E of the *Aviation Transport Security Regulations 2005* sets out an offence if the pilot in command of a relevant aircraft permits a person to enter, or remain in, the cockpit of the aircraft and the person is not a person who meets the requirements of that regulation.

Note 2: For the definition of *relevant aircraft*, see regulation 4.66 of the *Aviation Transport Security Regulations 2005*.

- (2) A person may occupy the pilot seat or other operating crew position in an aircraft, only if:
- (a) the person is a member of the operating crew who is duly assigned for duty in the aircraft and is licensed for the duties associated with that seat or position; or
  - (b) the person is authorised to enter the crew compartment to conduct examinations, inspections or checks of the aircraft, its equipment, a member of the operating crew or the ground organisation provided for use by aircraft.

Penalty: 50 penalty units.

- (3) The pilot in command of an aircraft shall admit an authorised person to the crew compartment and allow that person to occupy the seat or position appropriate for the performance of his or her duties if the pilot in command is not of the opinion that the person's admission to the crew compartment or occupation of that seat or position, as the case may be, would endanger the safety of the aircraft.

Penalty: 10 penalty units.

- (4) Whenever the pilot in command has refused to permit an authorised person to enter the crew compartment or occupy the seat or position appropriate for the

performance of his or her duties, the pilot in command shall, if so required by the authorised person, furnish a report in writing to CASA setting forth the reasons for his or her refusal.

Penalty: 5 penalty units.

- (4A) An offence against subregulation (1), (1A), (2), (3) or (4) is an offence of strict liability.

Note: For *strict liability*, see section 6.1 of the *Criminal Code*.

- (5) An authorised person must produce his or her identity card for inspection:
- (a) while acting as an authorised person; and
  - (b) if asked to do so by the pilot in command of the aircraft.
- (6) Where an authorised person:
- (a) is acting as an authorised person; and
  - (b) seeks admission, or is admitted, to the crew compartment of an aircraft; and
  - (c) fails to produce his or her identity card for inspection when asked to do so; that person is not authorised to be admitted under that subregulation and, if that person has been admitted, he or she must leave the crew compartment immediately.

## 228 Unauthorised persons not to manipulate controls

- (1) A person commits an offence if:
- (a) the person manipulates the controls of a registered aircraft during flight; and
  - (b) the person is not:
    - (i) if the aircraft is a balloon—authorised under Part 5 to fly the balloon or perform an activity essential to the balloon’s operation during flight time; or
    - (ii) for an aircraft other than a balloon—authorised under Part 61 of CASR to pilot the aircraft.

Penalty: 50 penalty units.

- (2) An offence against subregulation (1) is an offence of strict liability.

Note: For *strict liability*, see section 6.1 of the *Criminal Code*.

## 228A Definition of *qualified to taxi an aircraft*

For regulations 229 and 230, a person is *qualified* to taxi an aircraft if:

- (a) the person is authorised to taxi the aircraft under Part 61 or 64 of CASR; or
- (b) for a foreign registered aircraft—the person is authorised (however described) to taxi or fly the aircraft under the law of the aircraft’s State of registry.

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**229 Operation of aircraft on ground—only qualified persons may taxi aircraft**

- (1) A person commits an offence if:
- (a) the person taxis an aircraft; and
  - (b) the person is not qualified to taxi the aircraft.

Penalty: 50 penalty units.

- (2) An offence against this regulation is an offence of strict liability.

**230 Starting and running of engines**

- (1) A person must not:
- (a) start the engine of an Australian aircraft; or
  - (b) permit the engine of an Australian aircraft to be run;
- if it is not permitted by this regulation.

Penalty: 25 penalty units.

- (1A) An offence against subregulation (1) is an offence of strict liability.

Note: For *strict liability*, see section 6.1 of the *Criminal Code*.

- (2) The engine may be started or run while the aircraft is inside or outside Australian territory if the control seat is occupied by an approved person or by a person who is qualified to taxi the aircraft.
- (3) If the aircraft is an aeroplane that is having maintenance carried out on it, or that is being used for the provision of maintenance training, the engine may be started or run if the control seat is occupied:
- (a) whether the aircraft is inside or outside Australian territory—by a person who:
    - (i) holds:
      - (A) an aircraft engineer licence that permits him or her to perform maintenance certification for maintenance carried out on the engine; or
      - (B) an airworthiness authority covering the maintenance; and
    - (ii) has sufficient knowledge of the aircraft's controls and systems to ensure the starting or running does not endanger any person or damage the aircraft; or
  - (b) if the aircraft is outside Australian territory—by a person who:
    - (i) if the aircraft is in a Contracting State—may under the law of the Contracting State start or run engines of the same type in connection with the carrying out of maintenance, or the provision of maintenance training, as the case requires; or
    - (ii) has qualifications that are recognised by CASA as adequate for the purpose of starting or running engines of aircraft of the same type in connection with the carrying out of maintenance, or the provision of maintenance training, as the case requires.

- (4) If the aircraft is a rotorcraft or airship that is having maintenance carried out on it, or that is being used for the provision of maintenance training, the engine may be started or run:
- (a) whether the aircraft is inside or outside Australian territory—by a person authorised, in writing, by CASA or an authorised person to start and run the engine in connection with the carrying out of maintenance, or the provision of maintenance training, as the case requires; or
  - (b) if the aircraft is outside Australian territory—by a person who:
    - (i) if the aircraft is in a Contracting State—may under the law of the Contracting State start or run engines of the same type in connection with the carrying out of maintenance, or the provision of maintenance training, as the case requires; or
    - (ii) has qualifications that are recognised by CASA as adequate for the purpose of starting or running engines of aircraft of the same type in connection with the carrying out of maintenance, or the provision of maintenance training, as the case requires.
- (5) CASA may approve a person for the purposes of subregulation (2).
- (6) CASA or an authorised person may authorise a person for the purposes of paragraph (4)(a).
- (7) In this regulation:

***maintenance training*** means:

- (a) training for the purpose of obtaining a qualification to carry out maintenance on aircraft; or
- (b) maintenance training, within the meaning given by Part 3 of the CASR Dictionary.

### **231 Manipulation of propeller**

- (1) In spite of regulations 225 and 230 and subregulation (2), the pilot in command of an aircraft which requires an operating crew of only one pilot may manipulate the propeller of the aircraft for the purposes of starting the aircraft if:
- (a) assistance is not readily available for that purpose;
  - (b) adequate provision is made to prevent the aircraft moving forward; and
  - (c) no person is on board the aircraft.
- (2) The registration holder, or operator, or the pilot in command, of an Australian aircraft must not permit a person to manipulate the propeller of the aircraft to start the engine if the registration holder, operator or pilot in command is not satisfied that the person who is to manipulate the propeller knows the correct starting procedures for the aircraft.

Penalty: 25 penalty units.

- (3) An offence against subregulation (2) is an offence of strict liability.

Note: For ***strict liability***, see section 6.1 of the *Criminal Code*.

- (i) operate the computer; or
    - (ii) enter data into, or verify data in, the computer;
  - (c) the notification to the personnel of an operator or to a pilot in command or other flight crew member of operational procedures relating to the computer;
  - (d) the inclusion of the operational procedures in the operator's operations manual.
- (3) Where the operator of an aircraft has established operational procedures in relation to a computer under subregulation (1):
- (a) each member of the personnel of the operator; and
  - (b) the pilot in command and other members of the flight crew of that aircraft;
- shall, in relation to that computer, comply with those operational procedures.
- (4) A direction given under this regulation shall not take effect until:
- (a) the twenty-eighth day after the day on which the direction is given; or
  - (b) if a later day of effect is specified in the direction, that later day.

### **233 Responsibility of pilot in command before flight**

- (1) The pilot in command of an aircraft must not commence a flight if he or she has not received evidence, and taken such action as is necessary to ensure, that:
- (a) the instruments and equipment required for the particular type of operation to be undertaken are installed in the aircraft and are functioning properly;
  - (b) the gross weight of the aircraft does not exceed the limitations fixed by or under regulation 235 and is such that flight performance in accordance with the standards specified by CASA for the type of operation to be undertaken is possible under the prevailing conditions; and
  - (c) any directions of CASA with respect to the loading of the aircraft given under regulation 235 have been complied with;
  - (d) the fuel supplies are sufficient for the particular flight;
  - (e) the required operating and other crew members are on board and in a fit state to perform their duties;
  - (f) the air traffic control instructions have been complied with;
  - (g) the aircraft is safe for flight in all respects; and
  - (h) the aeronautical data and aeronautical information mentioned in subregulation (1A) is carried in the aircraft and is readily accessible to the flight crew.

Penalty: 50 penalty units.

- (1A) For paragraph (1)(h), the aeronautical data and aeronautical information is the aeronautical data and aeronautical information:
- (a) that is applicable to the route to be flown and to any alternative route that may be flown on that flight; and
  - (b) that is published:
    - (i) in the AIP; or

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- (ii) by a data service provider; or
- (iii) by the holder of an approval mentioned in regulation 202.961 or 202.962 of CASR.

- (2) The pilot in command of an aircraft engaged in international air navigation must not commence a flight if the pilot has not completed an approved flight preparation form certifying that the pilot is satisfied of the matters specified in subregulation (1).

Penalty: 5 penalty units.

- (3) An operator must keep a completed flight preparation form for a period of 6 months.

Penalty: 5 penalty units.

- (4) An offence against subregulation (1), (2) or (3) is an offence of strict liability.

Note: For *strict liability*, see section 6.1 of the *Criminal Code*.

### 234 Fuel requirements

- (1) For the purposes of paragraph 98(5A)(a) of the Act, CASA may issue a legislative instrument prescribing requirements relating to fuel for aircraft.
- (2) Without limiting subregulation (1), the instrument may prescribe:
- (a) matters that must be considered when determining whether an aircraft has sufficient fuel to complete a flight safely; and
  - (b) the amounts of fuel that must be carried on board an aircraft for a flight; and
  - (c) procedures for monitoring amounts of fuel during a flight; and
  - (d) procedures to be followed if fuel reaches specified amounts during a flight.
- (3) The pilot in command of an aircraft for a flight commits an offence of strict liability if:
- (a) the pilot is subject to a requirement under the instrument made for the purposes of subregulation (1) in relation to the flight; and
  - (b) the pilot does not comply with the requirement in relation to the flight.

Penalty: 50 penalty units.

- (4) The operator of an aircraft commits an offence of strict liability if:
- (a) the operator is subject to a requirement under the instrument made for the purposes of subregulation (1) in relation to a flight of the aircraft; and
  - (b) the operator does not comply with the requirement in relation to the flight.

Penalty: 50 penalty units.

### **234A Oil requirements**

The operator and the pilot in command of an aircraft for a flight each commit an offence of strict liability if, when the aircraft begins the flight, the aircraft is not carrying sufficient oil to complete the flight safely.

Penalty: 50 penalty units.

### **235 Take-off and landing of aircraft etc**

- (1) CASA may, for the purposes of these Regulations, give directions setting out the method of estimating, with respect to an aircraft at anytime:
  - (a) the weight of the aircraft, together with the weight of all persons and goods (including fuel) on board the aircraft, at that time; and
  - (b) the centre of gravity of the aircraft at that time.
- (2) CASA may, for the purpose of ensuring the safety of air navigation, give directions setting out the manner of determining, with respect to a proposed flight of an aircraft:
  - (a) a maximum weight, being a weight less than the maximum take-off weight of the aircraft; or
  - (b) a maximum weight, being a weight less than the maximum landing weight of the aircraft;

that the gross weight of the aircraft at take-off or landing, as the case may be, is not to exceed.

- (2A) A person must not contravene a direction under subregulation (1) or (2).

Penalty: 50 penalty units.

- (3) A manner of determining a maximum weight referred to in subregulation (2) shall be such as to take into account such of the following considerations as CASA considers appropriate:
  - (a) the type of aircraft;
  - (b) the kind of operations to be carried out during the flight;
  - (c) the performance of the aircraft in configurations in which it is likely to be flown and with faults that are likely to occur;
  - (d) the meteorological conditions at the aerodrome at which the aircraft is to take off or land;
  - (e) the altitude of the aerodrome at which the aircraft is to take off or land;
  - (f) the aerodrome dimensions in the direction in which the aircraft is to take off or land;
  - (g) the material of which the surface of the aerodrome in the direction in which the aircraft is to take off or land is constituted and the condition and slope of that surface;
  - (h) the presence of obstacles in the vicinity of the flight path along which the aircraft is to take off, approach or land;

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- (i) the anticipated meteorological conditions over the intended route to be flown by the aircraft after take-off and over planned divergencies from that route; and
- (j) the altitude of the terrain along and on either side of the intended route to be flown by the aircraft after take-off and of planned divergencies from that route.

- (4) The pilot in command of an aircraft must not allow the aircraft to take off if its gross weight exceeds its maximum take-off weight or, if a lesser weight determined in accordance with a direction under subregulation (2) is applicable to the take-off, that lesser weight.

Penalty: 50 penalty units.

- (5) The pilot in command of an aircraft must not allow the aircraft to take off if its gross weight exceeds, by more than the weight of fuel that would normally be used in flying to its next landing place or planned alternative aerodrome, its maximum landing weight or, if a lesser weight determined in accordance with a direction under subregulation (2) is applicable to the landing at that place or aerodrome, that lesser weight.

Penalty: 50 penalty units.

- (6) The pilot in command of an aircraft, must not land the aircraft if its gross weight exceeds its maximum landing weight or, if a lesser weight determined in accordance with a direction under subregulation (2) is applicable to the landing, that lesser weight.

Penalty: 50 penalty units.

- (7) CASA may, for the purpose of ensuring the safety of air navigation, give directions with respect to the method of loading of persons and goods (including fuel) on aircraft.

- (7A) A person must not contravene a direction under subregulation (7).

Penalty: 50 penalty units.

- (8) The pilot in command of an aircraft must not allow the aircraft to take off or land if a direction given under this regulation, about the loading of the aircraft has not been complied with.

Penalty: 50 penalty units.

- (9) The pilot in command must ensure that the load of an aircraft throughout a flight shall be so distributed that the centre of gravity of the aircraft falls within the limitations specified in its certificate of airworthiness or its flight manual.

Penalty: 50 penalty units.

- (10) A direction given under this regulation does not have effect in relation to a person until it has been served on the person.

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### 238 Icing conditions

- (1) The pilot in command of an aircraft must not allow the aircraft to take off for a flight during which the aircraft may fly into known or expected icing conditions, if the aircraft is not adequately equipped with either de-icing or anti-icing equipment of the type and quantities directed by CASA.

Penalty: 25 penalty units.

- (2) An offence against subregulation (1) is an offence of strict liability.

Note: For *strict liability*, see section 6.1 of the *Criminal Code*.

### 239 Planning of flight by pilot in command

- (1) Before beginning a flight, the pilot in command shall study all available information appropriate to the intended operation, and, in the cases of flights away from the vicinity of an aerodrome and all I.F.R. flights, shall make a careful study of:
  - (a) current weather reports and forecasts for the route to be followed and at aerodromes to be used;
  - (b) the airways facilities available on the route to be followed and the condition of those facilities;
  - (c) the condition of aerodromes to be used and their suitability for the aircraft to be used; and
  - (d) the air traffic control rules and procedure appertaining to the particular flight;

and the pilot shall plan the flight in relation to the information obtained.

- (2) When meteorological conditions at the aerodromes of intended landing are forecast to be less than the minima specified by CASA, the pilot in command shall make provision for an alternative course of action and shall arrange for the aircraft to carry the necessary additional fuel.

Penalty: 25 penalty units.

- (3) An offence against subregulation (2) is an offence of strict liability.

Note: For *strict liability*, see section 6.1 of the *Criminal Code*.

### 240 Authority may issue instructions in relation to flight planning

- (1) CASA may, in relation to the planning of flights referred to in subregulation 239(1), issue instructions about:
  - (a) the weather reports or forecasts to which a pilot in command must have regard in planning a flight; and
  - (b) the circumstances in which a pilot in command must plan for an alternative course of action (including the use of alternate aerodromes); and
  - (c) the information that the pilot in command must take into account in planning an alternative course of action including:

- (i) the range and timeliness of the available meteorological information about the aircraft's destination; and
  - (ii) the type and number of radio navigation aids that must be available at the aircraft's destination; and
  - (d) the conditions that an alternate aerodrome must meet before it can be used as an alternate aerodrome.
- (2) If an instruction under subregulation (1) is not issued in the form of a Civil Aviation Order, the instruction does not bind a person until it has been:
- (a) served on the person; or
  - (b) published in NOTAMS or AIP.
- (3) CASA may give permission, subject to the conditions specified in the permission, for a pilot in command to plan a flight without having regard to an instruction under subregulation (1).

#### **241 Flight plans—submission to air traffic control in certain cases**

- (1) CASA may, by notice published in Aeronautical Information Publications, declare that flights included in specified classes of flights are flights in respect of which flight plans are required, in the interests of safety and to ensure compliance with the Convention, to be submitted to air traffic control.
- (2) Subject to subregulation (3), the pilot in command of an aircraft must not fly the aircraft on a flight included in a class of flights specified in a notice under subregulation (1) if a flight plan has not been submitted to air traffic control.

Penalty: 5 penalty units.

- (3) CASA may, in a notice under subregulation (1), specify the circumstances in which, and the conditions subject to which, a flight included in a class of flights specified in the notice may be commenced and carried on before the flight plans for the flight are submitted to air traffic control and subregulation (2) does not apply to and in relation to the flight of an aircraft that has been commenced in those circumstances and so long as the conditions so specified are complied with.
- (4) The pilot in command of an aircraft that deviates from a flight as specified in the flight plan that has been submitted under this regulation shall report the fact as soon as possible to air traffic control.

Penalty: 5 penalty units.

- (5) An offence against subregulation (2) or (4) is an offence of strict liability.

Note: For *strict liability*, see section 6.1 of the *Criminal Code*.

#### **242 Testing of radio apparatus**

- (1) Before an aircraft is taxied on the manoeuvring area of an aerodrome for the purpose of moving to the take-off position, the pilot in command shall check that

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the radio apparatus fitted to the aircraft and to be used in flight is functioning correctly.

Penalty: 25 penalty units.

- (2) If the check indicates any malfunctioning of any portion of the radio apparatus the pilot in command must not fly the aircraft until the apparatus has been certified by a person licensed or approved for the purpose as being in proper working order.

Penalty: 25 penalty units.

- (3) An offence against subregulation (1) or (2) is an offence of strict liability.

Note: For *strict liability*, see section 6.1 of the *Criminal Code*.

### **243 Listening watch**

- (1) When an aircraft is equipped with radio apparatus for use during flight, the pilot in command must maintain a listening watch, or must ensure that a listening watch is maintained, at all times commencing immediately prior to the time at which the aircraft commences to move on the manoeuvring area prior to flight and lasting until the aircraft is brought to a stop at the apron or other point of termination of the flight.

Penalty: 25 penalty units.

- (2) Where the means of communication between air traffic control and an aircraft under its control is a voice communication channel, the pilot in command and any other pilot for the time being operating the controls of the aircraft shall personally maintain a listening watch on the appropriate radio frequency.

Penalty: 25 penalty units.

- (3) An offence against subregulation (1) or (2) is an offence of strict liability.

Note: For *strict liability*, see section 6.1 of the *Criminal Code*.

### **244 Safety precautions before take-off**

- (1) Immediately before taking-off on any flight, the pilot in command of an aircraft shall:
- (a) test the flight controls on the ground to the full limit of their travel and make such other tests as are necessary to ensure that those controls are functioning correctly;
  - (b) ensure that locking and safety devices are removed and that hatches, doors and tank caps are secured; and
  - (c) ensure that all external surfaces of the aircraft are completely free from frost and ice.

Penalty: 50 penalty units.

- (2) CASA may give such directions as CASA considers necessary in the interests of safety in respect of the duties and responsibilities of the pilot in command and other persons for tests, checks and other precautions before the despatch of an aircraft on any flight.
- (3) A person must not contravene a direction.  
Penalty: 50 penalty units.
- (4) An offence against subregulation (1) or (3) is an offence of strict liability.

Note: For *strict liability*, see section 6.1 of the *Criminal Code*.

### **245 Tests before and during the take-off run**

- (1) CASA may give directions specifying the tests to be carried out by the pilot in command of an aircraft before the commencement of, and during, a take-off run in order to be satisfied that the engine and associated items of equipment are functioning correctly within the permissible limits of performance.
- (2) Before the commencement of, and during, a take-off run, the pilot in command of an aircraft shall:
  - (a) carry out all tests required to be carried out in relation to the aircraft under subregulation (1);
  - (b) test all flight instruments, and, in particular, all gyroscopic flight instruments, that it is possible to test so as to ensure that they are functioning correctly;
  - (c) ensure that all gyroscopic flight instruments are correctly set and uncaged; and
  - (d) perform such checks and tests as are required by the flight manual for, or the operations manual of, the aircraft.

Penalty: 25 penalty units.

- (3) If an inspection, check or test made under subregulation (2) indicates any departure from the permissible limits or any malfunctioning in any particular (not being a departure or malfunctioning that is a permissible unserviceability), the pilot in command shall not commence the take-off or, if the pilot has commenced the take-off, shall abandon the take-off or take such other action as the pilot considers appropriate to ensure the safety of the aircraft and of persons on board the aircraft.

Penalty: 50 penalty units.

- (4) An offence against subregulation (2) or (3) is an offence of strict liability.

Note: For *strict liability*, see section 6.1 of the *Criminal Code*.

### **246 Movement on manoeuvring area**

- (1) Immediately before take-off, the pilot in command shall manoeuvre the aircraft so that he or she is able to observe traffic on the manoeuvring area of the

## **Division 4—General provisions relating to the operation of aircraft**

### **248A Division 4 not to apply to New Zealand AOC holders with ANZA privileges**

This Division does not apply in relation to an aircraft operated under a New Zealand AOC with ANZA privileges.

### **249 Prohibition of carriage of passengers on certain flights**

- (1) The pilot in command of an aircraft that carries a passenger must not engage in any of the following types of flying:
  - (a) flying training given to a student pilot;
  - (b) practice of emergency procedures in the aircraft;
  - (c) low flying practice;
  - (d) testing an aircraft or its components, power plant or equipment.

Penalty: 50 penalty units.

- (2) An offence against subregulation (1) is an offence of strict liability.

Note: For *strict liability*, see section 6.1 of the *Criminal Code*.

- (3) An aircraft while engaged in flying of the type specified in paragraph (1)(d) may carry engineering and maintenance personnel who are required, as part of their duties, to be present in the aircraft during the flight for the purpose of flight observation or of maintenance of the aircraft, including any aircraft component installed in the aircraft.
- (4) For the purposes of this regulation, the categories of aircraft are as follows:
  - (a) aeroplanes;
  - (b) helicopters;
  - (c) gyroplanes;
  - (d) airships.

### **250 Carriage on wings, undercarriage etc**

- (1) The operator of an aircraft must not permit a person to be carried on:
  - (a) the wings or undercarriage of the aircraft; or
  - (b) any part of the aircraft that is not designed for the accommodation of the crew or passengers; or
  - (c) anything attached to the aircraft.

Penalty: 50 penalty units.

- (1A) The pilot in command of an aircraft must not permit a person to be carried on:
  - (a) the wings or undercarriage of the aircraft; or

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- (b) any part of the aircraft that is not designed for the accommodation of the crew or passengers; or
- (c) anything attached to the aircraft.

Penalty: 50 penalty units.

- (1B) Subregulations (1) and (1A) do not apply to prevent a member of the crew having temporary access to:
- (a) any part of the aircraft for the purpose of executing repairs or adjustments to the aircraft or its equipment, or doing anything that may be necessary for the safety of the aircraft or any persons or cargo carried in the aircraft; or
  - (b) any part of the aircraft in which goods or stores are being carried and to which proper means of access is provided.
- (2) A person may, with the permission of CASA given in respect of:
- (a) a particular flight;
  - (b) flights of a particular kind; or
  - (c) flights included in a series of flights;
- be carried, during a flight in respect of which the permission is given, on or in a part of an aircraft that is not designed for the accommodation of the crew or passengers, or on or in anything attached to an aircraft.
- (3) CASA may, when granting a permission referred to in subregulation (2), specify conditions subject to which a person may be carried.
- (4) A person must not contravene a condition to which a permission is subject.
- Penalty: 50 penalty units.
- (5) An offence against subregulation (1), (1A) or (4) is an offence of strict liability.
- Note: For *strict liability*, see section 6.1 of the *Criminal Code*.
- (6) It is a defence to a prosecution under subregulation (1) or (1A) if the person had CASA's permission under subregulation (2).
- Note: A defendant bears an evidential burden in relation to the matter in subregulation (6) (see subsection 13.3(3) of the *Criminal Code*).

## 251 Seat belts and safety harness

- (1) Subject to this regulation, seat belts shall be worn by all crew members and passengers:
- (a) during take-off and landing;
  - (b) during an instrument approach;
  - (c) when the aircraft is flying at a height of less than 1,000 feet above the terrain; and
  - (d) at all times in turbulent conditions.

Penalty: 10 penalty units.

- (2) Subregulation (1) does not apply in relation to an authorised officer of CASA undertaking examinations, inspections or checks of the work of an aircraft's crew or the operation of an aircraft or its equipment under regulation 262.
- (3) CASA may direct that a type of safety harness specified in the direction shall be worn in place of a seat belt in the circumstances set out in the direction.
- (4) The pilot in command shall ensure that a seat belt or safety harness is worn at all times during flight by at least one of the pilot crew members.

Penalty: 25 penalty units.

- (5) Subject to subregulation (6), the operator of an aircraft shall detail a member of the crew to ensure that a seat belt or safety harness is worn by each occupant of the aircraft during the times specified in subregulation (1) and to ensure that each belt or harness is adjusted to fit the wearer without slack.

Penalty: 10 penalty units.

- (6) CASA may, for the purpose of ensuring the safety of air navigation, give directions requiring the owner or operator of an aircraft to install in the aircraft an approved communications system to enable the pilot in command to notify passengers when a seat belt or safety harness is to be worn.

- (6A) A person must not contravene a direction.

Penalty: 10 penalty units.

- (7) A direction given under this regulation does not have effect in relation to a person until it has been served on the person.
- (8) An offence against subregulation (1), (4), (5) or (6A) is an offence of strict liability.

Note: For *strict liability*, see section 6.1 of the *Criminal Code*.

- (9) It is a defence to a prosecution under paragraph (1)(c) if CASA directed that seat belts need not be worn in that circumstance.

Note: A defendant bears an evidential burden in relation to the matter in subregulation (9) (see subsection 13.3(3) of the *Criminal Code*).

## 252 Provision of emergency systems etc

- (1) CASA may give directions with respect to the provision in Australian aircraft of such emergency systems and equipment, and such life-saving equipment, as CASA considers necessary to safeguard the aircraft and persons on board the aircraft.

- (1A) A person must not contravene a direction.

Penalty: 50 penalty units.

- (1B) An offence against subregulation (1A) is an offence of strict liability.

**Part 14** Air service operations

**Division 4** General provisions relating to the operation of aircraft

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Note: For *strict liability*, see section 6.1 of the *Criminal Code*.

- (2) In giving a direction under subregulation (1), CASA shall have regard to the type of operation in which the aircraft is to be used.
- (3) A direction given under this regulation does not have effect in relation to a person until it has been served on the person.

**252A Emergency locator transmitters**

- (1) The pilot in command of an Australian aircraft that is not an exempted aircraft may begin a flight only if the aircraft:
  - (a) is fitted with an approved ELT:
    - (i) that is in working order; and
    - (ii) whose switch is set to the position marked 'armed', if that switch has a position so marked; or
  - (b) carries, in a place readily accessible to the operating crew, an approved portable ELT that is in working order.

Penalty: 25 penalty units.

Note: For the maintenance requirements for emergency locator transmitters, see Part 4A. See also subsection 20AA(4) of the Act.

- (1A) An offence against subregulation (1) is an offence of strict liability.

Note: For *strict liability*, see section 6.1 of the *Criminal Code*.

- (2) Subregulation (1) does not apply in relation to a flight by an Australian aircraft if:
  - (a) the flight is to take place wholly within a radius of 50 miles from the aerodrome reference point of the aerodrome from which the flight is to begin; or
  - (b) the flight is, or is incidental to, an agricultural operation; or
  - (c) CASA has given permission for the flight under regulation 21.197 of CASR; or
  - (d) the aircraft is new and the flight is for a purpose associated with its manufacture, preparation or delivery; or
  - (e) the flight is for the purpose of moving the aircraft to a place to have an approved ELT fitted to the aircraft, or to have an approved ELT that is fitted to it repaired, removed or overhauled.
- (3) Subregulation (1) does not apply in relation to a flight by an Australian aircraft if, when the flight takes place:
  - (a) an approved ELT fitted to the aircraft, or an approved portable ELT usually carried in the aircraft, has been temporarily removed for inspection, repair, modification or replacement; and
  - (b) an entry has been made in the aircraft's log book, or approved alternative maintenance record, stating:
    - (i) the ELT's make, model and serial number; and

- (ii) the date on which it was removed; and
    - (iii) the reason for removing it; and
  - (c) a placard stating ‘ELT not installed or carried’ has been placed in the aircraft in a position where it can be seen by the aircraft’s pilot; and
  - (d) not more than 90 days have passed since the ELT was removed.
- (4) For an emergency locator transmitter, emergency position indicating radio beacon or personal locator beacon to be an eligible ELT, it must meet the following requirements:
  - (a) it must, if activated, operate simultaneously:
    - (i) in the frequency band 406 MHz–406.1 MHz; and
    - (ii) on 121.5 MHz;
  - (b) it must be registered with the Australian Maritime Safety Authority;
  - (c) if it is fitted with a lithium-sulphur dioxide battery—the battery must be of a type authorised by the FAA in accordance with TSO-C142 or TSO-C142a.
- (5) To be an approved ELT, an eligible ELT must meet the following requirements:
  - (a) it must be automatically activated on impact;
  - (b) it must be of one of the following types:
    - (i) a type authorised by the FAA in accordance with:
      - (A) TSO-C91a for operation on 121.5 MHz; and
      - (B) TSO-C126 for operation in the frequency band 406 MHz–406.1 MHz;
    - (ii) a type that CASA is satisfied:
      - (A) is operationally equivalent to a type mentioned in subparagraph (i); and
      - (B) performs at a level that is at least equivalent to the level of performance of a type mentioned in subparagraph (i).
- (6) To be an approved portable ELT, an eligible ELT must meet the following requirements:
  - (a) it must be portable;
  - (b) it must be of one of the following types:
    - (i) an emergency position indicating radio beacon of a type that meets the requirements of AS/NZS 4280.1:2003;
    - (ii) a personal locator beacon of a type that meets the requirements of AS/NZS 4280.2:2003;
    - (iii) a type authorised by the FAA in accordance with:
      - (A) TSO-C91a for operation on 121.5 MHz; and
      - (B) TSO-C126 for operation in the frequency band 406 MHz–406.1 MHz;
    - (iv) a type that CASA is satisfied:
      - (A) is operationally equivalent to a type mentioned in subparagraph (i), (ii) or (iii); and

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- (3) When an aircraft is in flight, the pilot in command must ensure that all exits to which this regulation applies are fastened in a way that permits their immediate use in an emergency.

Penalty: 25 penalty units.

- (4) An offence against subregulation (2) or (3) is an offence of strict liability.

Note: For *strict liability*, see section 6.1 of the *Criminal Code*.

### 255 Smoking in aircraft

- (1) Subject to subregulation (1A), a person must not smoke:

- (a) in a part of an aircraft in which a notice is permanently displayed indicating that smoking is prohibited at all times or without specifying a period during which smoking is prohibited;
- (b) anywhere in an aircraft during take-off, landing or refuelling or during a period:
  - (i) in which a notice is temporarily displayed indicating that smoking is prohibited; or
  - (ii) which is specified in a permanently displayed notice as a period during which smoking is prohibited; or
- (c) in a berth of a sleeper aircraft.

Penalty: 5 penalty units.

- (1A) A person must not smoke in an aircraft toilet.

Penalty: 50 penalty units.

- (2) The owner or operator of an aircraft and the pilot in command shall ensure:

- (a) that provision is made in the aircraft by which a notice indicating that smoking is prohibited may be displayed during the periods when smoking is prohibited or, where the permission of CASA has been obtained, that a notice is permanently displayed in the aircraft specifying the periods during which smoking is prohibited; and
- (b) that a notice indicating that smoking is prohibited at all times or without specifying a period during which smoking is prohibited is displayed:
  - (i) in such parts of the aircraft as are specified for the purpose in the aircraft's certificate of airworthiness or flight manual; and
  - (ii) in the case of a sleeper aircraft, in each of the berths of the aircraft.

Penalty: 25 penalty units.

- (3) The pilot in command of an aircraft must, if the permission of CASA has not been obtained under paragraph (2)(a) for the display of a permanent notice, ensure that the notice indicating that smoking is prohibited is displayed:

- (a) during take-off, landing and refuelling;
- (b) during such periods as are specified for the purpose in the aircraft's certificate of airworthiness or flight manual; and

(c) during a period in which the pilot considers that smoking should be prohibited in the interests of safety.

Penalty: 25 penalty units.

(3A) An offence against subregulation (1), (1A), (2) or (3) is an offence of strict liability.

Note: For *strict liability*, see section 6.1 of the *Criminal Code*.

(4) A notice required to be displayed in pursuance of this regulation shall be legible and shall be displayed in a conspicuous place.

## **256 Intoxicated persons not to act as pilots etc or be carried on aircraft**

(1) A person shall not, while in a state of intoxication, enter any aircraft.

Penalty: 5 penalty units.

(2) A person acting as a member of the operating crew of an aircraft, or carried in the aircraft to act as a member of the operating crew, shall not, while so acting or carried, be in a state in which, by reason of his or her having consumed, used, or absorbed any alcoholic liquor, drug, pharmaceutical or medicinal preparation or other substance, his or her capacity so to act is impaired.

Penalty: 50 penalty units.

(3) A person shall not act as, or perform any duties or functions preparatory to acting as, a member of the operating crew of an aircraft if the person has, during the period of 8 hours immediately preceding the departure of the aircraft consumed any alcoholic liquor.

Penalty: 50 penalty units.

(4) A person who is on board an aircraft as a member of the operating crew, or as a person carried in the aircraft for the purpose of acting as a member of the operating crew, shall not consume any alcoholic liquor.

Penalty: 50 penalty units.

(5) A person shall not, while acting in any capacity in either air traffic control or Flight Service, be in a state in which, by reason of his or her having consumed, used, or absorbed any alcoholic liquor, drug, pharmaceutical or medicinal preparation or other substance, his or her capacity so to act is impaired.

Penalty: 50 penalty units.

(6) A person shall not act in any capacity in either air traffic control or Flight Service if the person has, during the period of 8 hours immediately preceding the commencement of the period of duty in which he or she so acts, consumed any alcoholic liquor.

Penalty: 50 penalty units.

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- (7) A person who is on duty in either air traffic control or Flight Service shall not consume any alcoholic liquor.

Penalty for a contravention of this subregulation: 50 penalty units.

- (8) An offence against subregulation (1), (2), (3), (4), (5), (6) or (7) is an offence of strict liability.

Note: For *strict liability*, see section 6.1 of the *Criminal Code*.

### 256AA Offensive and disorderly behaviour

- (1) A person in an aircraft must not behave in an offensive and disorderly manner.

Penalty: 50 penalty units.

- (2) An offence against subregulation (1) is an offence of strict liability.

Note: For *strict liability*, see section 6.1 of the *Criminal Code*.

### 256A Carriage of animals

- (1) Subject to subregulation (8), the operator of an aircraft may permit a live animal to be in the aircraft only if:

- (a) the animal is in a container and is carried in accordance with this regulation; or
- (b) the animal is carried with the written permission of CASA and in accordance with any conditions specified in the permission.

Penalty: 25 penalty units.

- (1A) An offence against subregulation (1) is an offence of strict liability.

Note: For *strict liability*, see section 6.1 of the *Criminal Code*.

- (2) Subregulation (1) does not apply to a dog accompanying a visually impaired or hearing impaired person as a guide or an assistant if the dog is:

- (a) carried in the passenger cabin of the aircraft; and
- (b) placed on a moisture-absorbent mat as near to the person as practicable; and
- (c) restrained in a way that will prevent the dog from moving from the mat.

- (3) More than one animal must not be kept in the same container if doing so would be likely to affect adversely the safety of the aircraft.

- (4) A container must be so constructed that:

- (a) an animal kept in the container cannot escape from the container; and
- (b) any water or excreta in the container is not likely to escape from the container in normal flying conditions; and
- (c) the container will withstand being damaged in a way that may allow an animal, or water or excreta, in the container to escape.

- (5) A container in which an animal is kept must not be in the passenger cabin of an aircraft.
- (6) If:
  - (a) an animal is carried in an aircraft in a container; and
  - (b) if the animal is not restrained it could move around inside the container in a way that may alter the distribution of the load of the aircraft; and
  - (c) the safety of the aircraft may be affected adversely by that movement;the animal must be restrained in the container to prevent that movement.
- (7) The means of restraint must be strong enough to withstand being damaged in a way that may allow the animal to escape.
- (8) An animal must not be carried on an aircraft if carrying the animal would be likely to affect a person on the aircraft in a way that may affect adversely the safety of the aircraft.
- (9) In this regulation, **animal** means any member of the animal kingdom other than man.

### **257 Aerodrome meteorological minima**

- (1) CASA may, in respect of an aircraft operation, determine the meteorological minima for the landing or taking-off of an aircraft at an aerodrome.
- (2) A determination under subregulation (1) must be published in AIP or NOTAMS.
- (3) If an element of the meteorological minima for the take-off of an aircraft at an aerodrome is less than that determined for the aircraft operation at the aerodrome, the aircraft must not take-off from that aerodrome.

Penalty: 50 penalty units.

- (4) If an element of the meteorological minima for the landing of an aircraft at an aerodrome is less than that determined for the aircraft operation at the aerodrome, the aircraft must not land at that aerodrome.

Penalty: 50 penalty units.

- (4A) An offence against subregulation (3) or (4) is an offence of strict liability.

Note: For **strict liability**, see section 6.1 of the *Criminal Code*.

- (5) Subregulation (4) does not apply if an emergency arises that, in the interests of safety, makes it necessary for an aircraft to land at an aerodrome where the meteorological minima is less than that determined for that aircraft operation at that aerodrome.
- (6) This regulation does not prevent a pilot from:
  - (a) making an approach for the purpose of landing at an aerodrome; or
  - (b) continuing to fly towards an aerodrome of intended landing specified in the flight plan;

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if the pilot believes, on reasonable grounds, that the meteorological minima determined for that aerodrome will be at, or above, the meteorological minima determined for the aerodrome at the time of arrival at that aerodrome.

### 258 Flights over water

- (1) The pilot in command of the aircraft must not fly over water at a distance from land greater than the distance from which the aircraft could reach land if the engine, or, in the case of a multi-engined aircraft, the critical engine (being the engine the non-operation of which when the other engines are in operation gives the highest minimum speed at which the aircraft can be controlled) were inoperative.

Penalty: 10 penalty units.

- (2) An offence against subregulation (1) is an offence of strict liability.

Note: For *strict liability*, see section 6.1 of the *Criminal Code*.

- (3) It is a defence to a prosecution under subregulation (1) if the flight was:
  - (a) in accordance with directions issued by CASA; or
  - (b) in the course of departing from or landing at an aerodrome in accordance with a normal navigational procedure for departing from or landing at that aerodrome.

Note: A defendant bears an evidential burden in relation to the matters in subregulation (3) (see subsection 13.3(3) of the *Criminal Code*).

### 259 Manned free balloons

- (1) A person must not fly a free balloon if the person does not have the express permission of CASA and then only in accordance with the terms of that permission.

Penalty: 10 penalty units.

- (1A) An offence against subregulation (1) is an offence of strict liability.

Note: For *strict liability*, see section 6.1 of the *Criminal Code*.

- (2) This regulation does not apply to an unmanned free balloon to which Part 101 of CASR applies.

### 260 Manned fixed balloons and kites

- (1) Despite regulation 157, a person may fly a fixed balloon or kite at a height not exceeding 300 feet.
- (2) A person must not fly a fixed balloon or kite within 4 000 metres of an aerodrome or at a height of more than 300 feet if the following requirements are not satisfied:
  - (a) the person has CASA's permission to fly the balloon or kite at that height;
  - (b) the flight is in accordance with the terms of that permission.

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- (ii) any documents or drawings associated with the activity; and
  - (c) shall, at all reasonable times, have access to any aircraft for the purpose of inspecting the aircraft.
- (1A) A person must not prevent, or hinder, access by an authorised person to any place to which access is necessary for the purpose of carrying out any of the authorised person's powers or functions under these Regulations.
- Penalty: 50 penalty units.
- (1B) An offence against subregulation (1A) is an offence of strict liability.
- Note: For *strict liability*, see section 6.1 of the *Criminal Code*.
- (2) An authorised person must produce his or her identity card for inspection:
- (a) while acting as an authorised person; and
  - (b) if asked to do so by the occupier or person in charge, or apparently in charge, of the place or thing to which access is sought.
- (3) Where an authorised person:
- (a) is acting as an authorised person; and
  - (b) seeks or is allowed access to a place or thing specified in subregulation (1); and
  - (c) fails to produce his or her identity card for inspection when asked to do so; that person is not authorised to access under that subregulation and, if access has been given to that person, that access is to be terminated.

### 306 Liability for damage to aircraft during official tests

CASA or an officer shall not be liable for any loss or damage to an aircraft which occurs while the aircraft is in the custody of CASA for the purpose of official flying trials or other official tests, or in the course of transit to and from the place fixed for those trials or tests, or during any inspection by an officer in pursuance of these Regulations.

### 309 Powers of pilot in command

- (1) The pilot in command of an aircraft, with such assistance as is necessary and reasonable, may:
- (a) take such action, including the removal of a person from the aircraft or the placing of a person under restraint or in custody, by force, as the pilot considers reasonably necessary to ensure compliance with the Act or these Regulations in or in relation to the aircraft; and
  - (b) detain the passengers, crew and cargo for such period as the pilot considers reasonably necessary to ensure compliance with the Act or these Regulations in or in relation to the aircraft.
- (2) A person who, on an aircraft in flight, whether within or outside Australian territory, is found committing, or is reasonably suspected of having committed, or having attempted to commit, or of being about to commit, an offence against

the Act or these Regulations may be arrested without warrant by a member of the crew of the aircraft in the same manner as a person who is found committing a felony may, at common law, be arrested by a constable and shall be dealt with in the same manner as a person so arrested by a constable.

### **309A Instructions about activities on board aircraft**

- (1) Subject to subregulation (2), the operator, or pilot in command, of an Australian aircraft may give an instruction, either orally or in writing, prohibiting or limiting the doing of an act on board the aircraft during flight time in the aircraft.
- (2) The operator, or pilot in command, must not give an instruction unless he or she is satisfied on reasonable grounds that the instruction is necessary in the interests of the safety of air navigation.
- (3) An instruction does not bind a person unless it is communicated to the person.
- (4) A person who is bound by an instruction must comply with the instruction.

Penalty: 25 penalty units.

- (5) An offence against subregulation (4) is an offence of strict liability.

Note: For *strict liability*, see section 6.1 of the *Criminal Code*.

- (6) It is a defence to a prosecution under subregulation (4) if the person had a reasonable excuse.

Note: A defendant bears an evidential burden in relation to the matter in subregulation (6) (see subsection 13.3(3) of the *Criminal Code*).

## Schedule 5—CASA maintenance schedule

(subregulation 2(1), definition of *CASA maintenance schedule*)

### Part 1—Daily inspection

- 1.1 An inspection (in this Part called a *daily inspection*) must be carried out on the aircraft before the aircraft's first flight on each day on which the aircraft is flown.
- 1.2 A daily inspection must consist of the making of such of the checks set out in the table at the end of this Part as are applicable to the aircraft.

#### Table of checks included in a daily inspection

##### Section 1 General

- (1) *Check* that the ignition switches are off, the mixture control is lean or cut off, the throttle is closed and the fuel selector is on.
- (2) *Check* that the propeller blades are free from cracks, bends and detrimental nicks, that the propeller spinner is secure and free from cracks, that there is no evidence of oil or grease leakage from the propeller hub or actuating cylinder and that the propeller hub, where visible, has no evidence of any defect which would prevent safe operation.
- (3) *Check* that the induction system and all cooling air inlets are free from obstruction.
- (4) *Check* that the engine, where visible, has no fuel or oil leaks and that the exhaust system is secure and free from cracks.
- (5) *Check* that the oil quantity is within the limits specified by the manufacturer for safe operation and that the oil filler cap, dipstick and inspection panels are secure.
- (6) *Check* that the engine cowlings and cowl flaps are secure.
- (7) *Check* that the landing gear tyres are free from cuts or other damage, have no plies exposed and, by visual inspection, are adequately inflated.
- (8) *Check* that the landing gear oleo extensions are within normal static limits and that the landing gear doors are secure.
- (9) *Check* that the wing and fuselage surfaces are free from damage and that the inspection panels, flight control surfaces and flight control devices are secure.
- (10) *Check* that the interplane and centre section struts are free from damage and that the bracing wires are of the correct tension.
- (11) *Check* that the pitot heads and static ports are free from obstruction and that the pitot cover is removed or is free to operate.

## **Schedule 5** CASA maintenance schedule

### **Part 1** Daily inspection

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- (12) *Check* that the fuel tank filler caps, chains, vents and associated access panels are secure and free from damage.
- (13) *Check* that the empennage surfaces are free from damage and that the control surfaces control cables and control rods, where visible, are secure.
- (14) *Check* that the canard surfaces are free from damage and that the control surfaces, control cables and control rods, where visible, are secure.
- (15) *Check* that the flight controls, the trim systems and the high lift devices operable from the ground have full and free movement in the correct sense.
- (16) *Check* that the radios and antennae are secure and that where visible, radio units and interwiring are secure.
- (17) *Check* that the drain holes are free from obstruction.
- (18) *Check* that there is no snow, frost or ice on the wings, tail surfaces, canards, propeller or windscreen.
- (19) *Check* that each tank sump and fuel filter is free from water and foreign matter by draining a suitable quantity of fuel into a clean transparent container.
- (20) *Check* that the windscreen is clean and free from damage.
- (21) *Check* that the instruments are free from damage, legible and secure.
- (22) *Check* that the seat belts, buckles and inertia reels are free from damage, secure and functioning correctly.

### **Section 2** Additional items for agricultural aeroplanes

- (1) *Check* that the agricultural equipment is secure.
- (2) *Check* that the dump and fan brake mechanisms are free from obstructions and operate correctly.

### **Section 3** Additional items for seaplanes

- (1) *Check* that the hull and floats are free from damage, corrosion and water accumulation.
- (2) *Check* that the float attachment struts, bracing wires and attachment fittings are secure and free from damage and corrosion.
- (3) *Check* that the water rudder and its attachments are secure and free from damage and corrosion and that the water rudder has full, free and correct travel.

## **Schedule 8—Maintenance that may be carried out on a Class B aircraft by a person entitled to do so under subregulation 42ZC(4)**

(subregulation 42ZC(4))

### **Part 1—Maintenance on Class B aircraft other than balloons**

1. Removal or installation of landing gear tyres, but only if the removal or installation does not involve the complete jacking of the aircraft.
2. Repair of pneumatic tubes of landing gear tyres.
3. Servicing of landing gear wheel bearings.
4. Replacement of defective safety wiring or split pins, but not including wiring or pins in control systems.
5. Removal or refitting of a door, but only if:
  - (a) no disassembly of the primary structure or operating system of the aircraft is involved; and
  - (b) if the aircraft is to be operated with the door removed—the aircraft has a flight manual and the manual indicates that the aircraft may be operated with the door removed.
6. Replacement of side windows in an unpressurised aircraft.
7. Replacement of seats, but only if the replacement does not involve disassembly of any part of the primary structure of the aircraft.
8. Repairs to the upholstery or decorative furnishings of the interior of the cabin or cockpit.
9. Replacement of seat belts or harnesses.
10. Replacement or repair of signs and markings.
11. Replacement of bulbs, reflectors, glasses, lenses or lights.
12. Replacement, cleaning, or setting gaps of, spark plugs.
13. Replacement of batteries.
14. Changing oil filters or air filters.
15. Changing or replenishing engine oil or fuel.
16. Lubrication not requiring disassembly or requiring only the removal of non-structural parts, or of cover plates, cowlings and fairings.
17. Replenishment of hydraulic fluid.

**Schedule 8** Maintenance that may be carried out on a Class B aircraft by a person entitled to do so under subregulation 42ZC(4)

**Part 1** Maintenance on Class B aircraft other than balloons

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18. Application of preservative or protective materials, but only if no disassembly of the primary structure or operating system of the aircraft is involved.
19. Removal or replacement of equipment used for agricultural purposes.
20. Removal or replacement of glider tow hooks.
21. Carrying out of an inspection under regulation 42G of a flight control system that has been assembled, adjusted, repaired, modified or replaced.
22. Carrying out of a daily inspection of an aircraft.
23. Connection and disconnection of optional dual control in an aircraft without the use of any tools for the purpose of transitioning the aircraft from single to dual, or dual to single, pilot operation.
24. Inspections or checks set out in the following documents in circumstances where the document clearly states that the maintenance may be carried out by the pilot of the aircraft and the maintenance does not require the use of any tools or equipment:
  - (a) the aircraft's approved maintenance data;
  - (b) the aircraft's flight manual or an equivalent document;
  - (c) any instructions issued by the NAA that approved the type certificate for the aircraft.
25. For an aircraft that is installed with an oxygen system for the exclusive use of ill or injured persons on an aircraft used to perform ambulance functions—replenishing the oxygen system installed on the aircraft.

## **Schedule 9—Maintenance control manual and maintenance controller**

(regulation 42ZV)

### **Part 1—Requirements for person who is a maintenance controller**

- 1.1 To be the maintenance controller a person must:
- (a) know and understand the operator's maintenance control manual; and
  - (b) know and understand the requirements of these Regulations in relation to the maintenance of aircraft; and
  - (c) demonstrate the required knowledge and understanding for the purposes of being approved as the maintenance controller.

## **Part 2—Functions of maintenance controller**

- 2.1 A maintenance controller must perform the following functions:
- (a) the control of all maintenance carried out on the aircraft, either scheduled or unscheduled;
  - (b) the development, organisation and supervision of all activities and procedures specified in the maintenance control manual;
  - (c) the transfer of an aircraft's maintenance records to a new Certificate of Registration holder for the aircraft;
  - (d) the investigation of all defects in the aircraft that come to the attention of the aircraft's maintenance organisation.



**EXTRACTS FROM THE  
CIVIL AVIATION SAFETY  
REGULATIONS (CASR)**



**Division 61.A.3—Performing flight crew duties without licence, rating or endorsement****Subdivision 61.A.3.1—Student pilots****61.112 Flying as a student pilot**

- (1) Subject to regulations 61.113 to 61.115, a person who does not hold a pilot licence is authorised to pilot an aircraft if:
  - (a) the pilot in command of the aircraft is a flight instructor and the flight is for the purpose of the person receiving flight training; or
  - (b) the flight is for a flight test for a pilot licence, or a rating or endorsement on a pilot licence, for the person; or
  - (c) the flight is:
    - (i) approved by, and conducted under the supervision of, a flight instructor authorised by a Part 141 or 142 operator to conduct the supervision; and
    - (ii) conducted under the VFR; and
    - (iii) conducted in accordance with the flight instructor's approval.
- (2) Subject to regulations 61.113 to 61.115, the holder of a recreational pilot licence is authorised to pilot a recreational aircraft under the VFR at night, or a non-recreational aircraft, if:
  - (a) the pilot in command of the aircraft is a flight instructor and the flight is for the purpose of receiving flight training; or
  - (b) the flight is for a flight test for another pilot licence or a rating or endorsement on a pilot licence; or
  - (c) the flight is:
    - (i) approved by, and conducted under the supervision of, a flight instructor authorised by a Part 141 or 142 operator to conduct the supervision; and
    - (ii) conducted under the VFR; and
    - (iii) conducted in accordance with the flight instructor's approval.

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- (3) For subparagraphs (1)(c)(i) and (2)(c)(i), a flight is conducted under the supervision of a flight instructor if the instructor:
- (a) provides guidance to the person in relation to the flight; and
  - (b) during the flight:
    - (i) is on board the aircraft; or
    - (ii) is at the aerodrome from which the flight began; or
    - (iii) is flying within 15 nautical miles of the aerodrome reference point for the aerodrome from which the flight began; and
  - (c) can be contacted during the flight by radio or other electronic means.
- (4) For regulations 61.405 to 61.415 (which are about medical requirements), piloting an aircraft in accordance with subregulation (3) does not constitute the exercise of the privileges of a pilot licence.

Note: A person authorised to pilot an aircraft by this regulation is a *student pilot*: see Part 1 of the Dictionary.

**61.113 General requirements for student pilots**

- (1) A student pilot is authorised to conduct a solo flight in an aircraft only if the student pilot:
- (a) has an ARN; and
  - (b) is at least 15.
- (2) A student pilot is not authorised to pilot an aircraft carrying passengers.
- (3) A student pilot is authorised to pilot an aircraft on a solo flight in another Contracting State's airspace only if the student pilot has the permission (however described) of the Contracting State.
- (4) A student pilot is not authorised to pilot an aircraft other than a registered aircraft.

**61.114 Solo flights—medical requirements for student pilots**

- (1) Subregulation (2) applies to:

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- (a) the conduct of a solo flight in an aircraft other than a recreational aircraft; or
  - (b) the conduct of a solo flight in a recreational aircraft under the VFR at night.
- (2) A student pilot is authorised to conduct the flight only if:
- (a) the student pilot:
    - (i) holds a class 1 or 2 medical certificate; and
    - (ii) carries the medical certificate on the flight; or
  - (b) the student pilot:
    - (i) holds a medical exemption for the flight; and
    - (ii) carries a copy of the exemption on the flight.
- (3) Subregulation (4) applies to the conduct of a solo flight in a recreational aircraft by day, other than by the holder of a recreational pilot licence.
- (4) A student pilot is authorised to conduct the flight only if:
- (a) the student pilot:
    - (i) holds a class 1 or 2 medical certificate; and
    - (ii) carries the medical certificate on the flight; or
  - (b) the student pilot:
    - (i) holds a current recreational aviation medical practitioner's certificate; and
    - (ii) meets the requirements mentioned in subregulation (5);  
or
  - (c) the student pilot:
    - (i) holds a medical exemption for the flight; and
    - (ii) carries a copy of the exemption on the flight.
- (5) For subparagraph (4)(b)(ii), the requirements are as follows:
- (a) the student pilot must have:
    - (i) given CASA a copy of his or her recreational aviation medical practitioner's certificate; and
    - (ii) received from CASA a written acknowledgement of the receipt of the copy;
  - (b) the student pilot must carry both of the following on the flight:

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- (i) a copy of the certificate;
- (ii) a copy of the acknowledgement mentioned in subparagraph (a)(ii);
- (c) the student pilot must comply with any limitations or conditions stated on the certificate;
- (d) the student pilot must meet the modified Austroads medical standards.

Note: For when a person meets the modified Austroads medical standards, see regulation 67.262.

- (6) In this regulation:

**current:** a recreational aviation medical practitioner's certificate for a student pilot is **current** for the shortest of the following periods:

- (a) the period beginning on the day the certificate is signed by the medical practitioner and ending 24 months after that day;
- (b) if, when the student pilot conducts a solo flight the student pilot is at least 65—the period beginning on the day the certificate is signed by the medical practitioner and ending 12 months after that day;
- (c) if the certificate states the period for which it applies—the period beginning on the day the certificate is signed by the medical practitioner and ending at the end of the stated period.

**61.115 Solo flights—recent experience requirements for student pilots**

- (1) A student pilot is authorised to conduct a solo flight in an aircraft only if:
  - (a) the student pilot has, within the previous 14 days and in the same type of aircraft, successfully completed a dual flight check; and
  - (b) as a result of the flight, his or her solo flight time since he or she last successfully completed a dual flight check would not exceed 3 hours.

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- (2) However, paragraph (1)(b) does not apply to the student pilot if the student pilot is enrolled in an integrated training course.

**61.116 Student pilots authorised to taxi aircraft**

A student pilot is authorised to taxi an aircraft if the student pilot is approved to taxi the aircraft by a flight instructor.

Note: See regulation 229 of CAR for an offence relating to taxiing aircraft without being authorised to do so.

**61.117 Identity checks—student pilots**

- (1) CASA may, by written notice given to a student pilot, require the student pilot to provide evidence of his or her identity in accordance with paragraph 6.57(1)(a) of the *Aviation Transport Security Regulations 2005*.
- (2) The student pilot commits an offence if:
- (a) CASA has not told the student pilot, in writing, that he or she has complied with the requirement; and
  - (b) the student pilots an aircraft.

Penalty: 50 penalty units.

- (3) An offence against this regulation is an offence of strict liability.

**61.118 Production of medical certificates etc. and identification—student pilots**

- (1) CASA may direct a student pilot to produce any or all of the following documents for inspection by CASA:
- (a) unless the student pilot holds a medical exemption to conduct a solo flight—the student pilot's medical certificate or recreational aviation medical practitioner's certificate;
  - (b) a document that includes a photograph of the student pilot showing the student's full face and his or her head and shoulders:
    - (i) that was issued within the previous 10 years by the government, or a government authority, of:
      - (A) the Commonwealth or a State or Territory; or

**Part 61** Flight crew licensing**Subpart 61.A** Preliminary**Division 61.A.3** Performing flight crew duties without licence, rating or endorsement**Regulation 61.119**

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- (B) a foreign country, or a state or province  
(however described) of a foreign country; and
  - (ii) that has not expired or been cancelled.
- (2) The student pilot commits an offence if:
- (a) CASA directs the student pilot to produce a document under subregulation (1); and
  - (b) the student pilot does not produce the document before the earlier of the following:
    - (i) when the student pilot next conducts a solo flight;
    - (ii) within 7 days after the direction is given.
- Penalty: 50 penalty units.
- (3) An offence against this regulation is an offence of strict liability.

**Subdivision 61.A.3.2—Other circumstances in which flight crew duties may be performed without licence, rating or endorsement**

**61.119 Flying without licence—flight engineer duties**

A person who does not hold a flight engineer licence is authorised to perform the duties of a flight engineer in a registered aircraft while:

- (a) receiving flight training from a flight engineer instructor; or
- (b) taking a flight test for a flight engineer licence or a flight crew rating or endorsement on a flight engineer licence.

**61.120 Operation of aircraft radio without licence**

A person who does not hold a flight crew licence, or who holds a recreational pilot licence but does not hold a flight radio endorsement, is authorised to transmit on a radio frequency of a kind used for the purpose of ensuring the safety of air navigation if:

- (a) the transmission is made while receiving training for a flight crew licence or flight radio endorsement; and
- (b) the transmission is approved by an instructor; and
- (c) the transmission is for the purpose of:

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- (i) safely conducting a flight that is approved by a flight instructor; or
- (ii) receiving training in the use of an aircraft radio.

Note: A person is prohibited from transmitting on a radio frequency of a kind used for the purpose of ensuring the safety of air navigation unless the person is qualified to do so: see regulation 83 of CAR.

**61.125 Conducting flight activities without rating or endorsement**

- (1) A person who holds a pilot licence, but does not hold a rating or endorsement for the conduct of an activity for which a rating or endorsement is required under this Part, is authorised to conduct the activity if:
  - (a) the activity is conducted while:
    - (i) receiving flight training for the rating or endorsement; or
    - (ii) taking a flight test for the rating or endorsement; or
    - (iii) meeting the aeronautical experience requirements for the rating or endorsement; and
  - (b) the activity is approved by, and conducted under the supervision of, a flight instructor.
- (2) A person who holds a flight engineer licence, but does not hold a rating or endorsement for the conduct of an activity for which a rating or endorsement is required under this Part, is authorised to conduct the activity if:
  - (a) the activity is conducted while:
    - (i) receiving flight training for the rating or endorsement; or
    - (ii) taking a flight test for the rating or endorsement; or
    - (iii) meeting the aeronautical experience requirements for the rating or endorsement; and
  - (b) the activity is approved by, and conducted under the supervision of, a flight engineer instructor.

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- (b) if the application is for a pilot licence—include an application for an aircraft category rating.
- (2A) Subregulation (2B) applies if the application is for a flight crew licence and the applicant has not:
  - (a) applied to CASA for another flight crew licence in the previous 10 years and submitted with the application a photograph of the applicant; or
  - (b) given to CASA, within the previous 10 years, a photograph of the applicant in response to a direction or request in writing by CASA to the applicant.
- (2B) The applicant must also submit to CASA a recent photograph of the applicant, showing the applicant's full face and his or her head and shoulders.
- (3) If the requirements for the grant of a flight crew licence, rating or endorsement (the *second authorisation*) include a requirement that the applicant hold, or be eligible for, another flight crew licence, rating or endorsement (the *first authorisation*), a person may:
  - (a) apply for the first and second authorisations at the same time; or
  - (b) apply for the second authorisation at any time after applying for the first authorisation, whether or not the first authorisation has been granted before the person applies for the second authorisation.

**61.160 Grant of flight crew licences**

Subject to regulation 11.055, CASA must grant a flight crew licence to an applicant for the licence if:

- (a) the application complies with regulation 61.155; and
- (b) the applicant:
  - (i) meets the requirements mentioned in this Part for the grant of the licence; and
  - (ii) for a flight crew licence other than a recreational pilot licence—has a current aviation English language proficiency assessment; and

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- (iii) for a recreational pilot licence—meets the general English language proficiency requirements mentioned in regulation 61.265.

Note: Despite anything in these Regulations, CASA is not to issue a flight crew licence to an applicant unless certain requirements are met: see regulation 6.57 of the *Aviation Transport Security Regulations 2005*.

**61.165 Grant of flight crew ratings**

Subject to regulation 11.055, CASA, or an examiner or an approval holder within the meaning of regulation 61.150, must grant a flight crew rating to an applicant for the rating if:

- (a) the application complies with regulation 61.155; and
- (b) for an application to an examiner or approval holder—the examiner or approval holder may, under regulation 61.150, grant the rating; and
- (c) the applicant meets the requirements mentioned in this Part for the grant of the rating.

**61.170 Grant of flight crew endorsements**

Subject to regulation 11.055, CASA, or an examiner, instructor or an approval holder within the meaning of regulation 61.150, must grant a flight crew endorsement to an applicant for the endorsement if:

- (a) the application complies with regulation 61.155; and
- (b) for an application to an examiner, instructor or approval holder—the examiner, instructor or approval holder may, under regulation 61.150, grant the endorsement; and
- (c) the applicant meets the requirements mentioned in this Part for the grant of the endorsement.

**61.175 How CASA issues flight crew licences, ratings and endorsements**

- (1) Subregulation (2) applies if:
  - (a) CASA grants a flight crew licence to a person under regulation 61.160; and
  - (b) the person does not already hold a flight crew licence.

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- (B) a foreign country, or a state or province  
(however described) of a foreign country; and
- (ii) that has not expired or been cancelled.
- (3) The holder of a flight crew licence or certificate of validation commits an offence if:
- (a) CASA directs the holder to produce a document under subregulation (1) or (2); and
  - (b) the holder does not produce the document within the period mentioned in subregulation (4).
- Penalty: 50 penalty units.
- (4) For paragraph (3)(b), the period is as follows:
- (a) if, when the direction was given, the holder was exercising, had just finished exercising, or was about to exercise, the privileges of the licence or certificate of validation—immediately;
  - (b) in any other case—7 days after the day the direction is given.
- (5) An offence against this regulation is an offence of strict liability.

**61.345 Personal logbooks—pilots**

- (1) A person who holds a pilot licence, or a certificate of validation of an overseas flight crew licence that is equivalent to a pilot licence, commits an offence if the person does not keep a personal logbook in accordance with this regulation.
- Penalty: 50 penalty units.
- (2) The person must record his or her full name and date of birth in the person's logbook.
- (3) The person must, as soon as practicable after completing each flight, record the following information in the person's logbook for the flight:
- (a) the date the flight began;
  - (b) the type of aircraft;
  - (c) whether it was a single-engine or multi-engine aircraft;
  - (d) the aircraft's nationality and registration marks;

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- (e) the take-off and landing points for the flight, and for each segment of the flight;
  - (f) the flight time (if any) flown in each of the following capacities:
    - (i) pilot in command;
    - (ii) co-pilot;
    - (iii) pilot in command under supervision;
    - (iv) pilot receiving flight training;
  - (g) if the person is a flight instructor—any flight time spent exercising the privileges of his or her flight instructor rating;
  - (h) if the person is a flight examiner—any flight time spent exercising the privileges of his or her flight examiner rating;
    - (i) whether the flight was by day or night, or both;
    - (j) any instrument flight time;
  - (k) whether the person conducted an instrument approach operation and, if so, the type of instrument approach procedure.
- (4) The person must, as soon as practicable after completing each simulated flight in a flight simulation training device, record the following information in the person's logbook for the simulated flight:
- (a) the date the simulated flight began;
  - (b) the type of aircraft represented by the device;
  - (c) the simulated flight time (if any) performed in each of the following capacities:
    - (i) pilot in command;
    - (ii) co-pilot;
    - (iii) pilot in command under supervision;
    - (iv) pilot receiving flight training;
  - (d) if the person is a flight instructor or simulator instructor—any time spent exercising the privileges of his or her instructor rating;
  - (e) whether the flight was conducted in simulated day or night conditions, or both;
  - (f) a description of the simulated flight activity.

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- (e) whether the holder was operating under training or supervision, or was conducting training or supervision;
- (f) the amount of time for which the holder performed the duties of flight engineer;
- (g) if the person is a flight engineer instructor—any flight time spent exercising the privileges of his or her flight engineer instructor rating.

#### **61.355 Retention of personal logbooks**

- (1) A person commits an offence if:
  - (a) the person is required to keep a personal logbook under regulation 61.345 or 61.350; and
  - (b) the person does not retain the logbook for 7 years after the day the last entry is made in it.

Penalty: 50 penalty units.

- (2) A person commits an offence if:
  - (a) the person is required to keep a personal logbook under regulation 61.345 or 61.350; and
  - (b) the person does not ensure that each entry in the logbook is retained unaltered throughout the period mentioned in subregulation (1).

Penalty: 50 penalty units.

- (3) An offence against this regulation is an offence of strict liability.

#### **61.360 False entries in personal logbooks**

- (1) The holder of a flight crew licence or certificate of validation commits an offence if:
  - (a) the holder makes an entry in his or her personal logbook; and
  - (b) the entry is false or misleading.

Penalty: 50 penalty units.

- (2) Paragraph (1)(b) does not apply if the entry is not false or misleading in a material particular.

## **Subpart 61.E—Pilot licensing—general limitations and authorisations**

Note: Subpart 61.E does not apply to glider pilot licences: see the definition of *pilot licence* in regulation 61.010. Subpart 61.Z deals with glider pilot licences.

### **Division 61.E.1—General limitations on exercise of pilot licence privileges**

#### **61.375 Limitations on exercise of privileges of pilot licences—ratings**

- (1) This regulation applies to the holder of a pilot licence.
- (2) The holder is authorised to exercise the privileges of the licence in an aircraft of a particular category only if the holder also holds, as the associated aircraft category rating for the licence, the aircraft category rating for that category of aircraft.

Note: An aircraft category rating has effect only in conjunction with the licence for which it is granted. It does not authorise the exercise, in the aircraft category covered by the rating, of the privileges of any other licence held by the holder of the rating: see the definition of *associated* in regulation 61.010.

- (3) The holder is authorised to exercise the privileges of the licence in an aircraft, other than an aircraft mentioned in subregulation (5), only if the holder also holds an appropriate aircraft class rating for the aircraft.
- (4) For subregulation (3), either of the following is an appropriate aircraft class rating for an aeroplane in the single-engine aeroplane class:
  - (a) the single-engine aeroplane class rating;
  - (b) the multi-engine aeroplane class rating.
- (5) The holder is authorised to exercise the privileges of the licence in:
  - (a) a multi-crew aircraft; or
  - (b) an aircraft:
    - (i) that is certificated for single-pilot operation; and

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- (ii) for which a single-pilot type rating is required by a legislative instrument under regulation 61.060;  
only if the holder also holds the appropriate pilot type rating for the aircraft type.
- (6) However, the holder is not required to hold the pilot type rating for the aircraft if:
  - (a) the person is acting as a cruise relief co-pilot for the aircraft;  
and
  - (b) the person holds a cruise relief co-pilot type rating for the aircraft type.
- (7) The holder is authorised to conduct an activity mentioned in column 1 of an item in table 61.375 in the exercise of the privileges of the licence only if the holder also holds the rating mentioned in column 2 of the item.
- (8) However:
  - (a) the holder of a multi-crew pilot licence with an aeroplane category rating is authorised, without holding an instrument rating, to pilot an aeroplane in a multi-crew operation:
    - (i) under the IFR; or
    - (ii) at night under the VFR; and
  - (b) the holder of an air transport pilot licence with an aeroplane category rating is authorised, without holding an instrument rating, to pilot an aeroplane:
    - (i) under the IFR; or
    - (ii) at night under the VFR; and
  - (c) the holder of an air transport pilot licence with a powered-lift category rating is authorised, without holding an instrument rating, to pilot a powered-lift aircraft:
    - (i) under the IFR; or
    - (ii) at night under the VFR.

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Pilot licensing—general limitations and authorisations **Subpart 61.E**  
General limitations on exercise of pilot licence privileges **Division 61.E.1**

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**Table 61.375 Activities for which ratings are required**

Item	Column 1 Activity	Column 2 Rating
1	An operation under the IFR, other than an operation mentioned in item 2	Instrument rating
2	A private operation under the IFR	Either: (a) instrument rating; or (b) private instrument rating
3	An operation at night under the VFR, other than: (a) an operation using a night vision imaging system; or (b) a night aerial application operation below 500 ft AGL	Either: (a) night VFR rating; or (b) instrument rating
4	An operation at night under the VFR using a night vision imaging system	Night vision imaging system rating
5	A low-level operation	Either: (a) low-level rating; or (b) aerial application rating
6	An aerial application operation below 500 ft AGL	Aerial application rating
7	An activity mentioned in paragraph 61.1165(a), (c), (d), (e) or (f) in an aircraft  An activity mentioned in paragraph 61.1165(g), (h) or (i)	Flight instructor rating
8	An activity mentioned in paragraph 61.1190(a), (c), (d), (e) or (f) in a flight simulation training device  An activity mentioned in paragraph 61.1165(b), (j) or (k) or 61.1190(b), (g) or (h)	Either: (a) flight instructor rating; or (b) simulator instructor rating

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## Regulation 61.380

**Table 61.375** Activities for which ratings are required

<b>Item</b>	<b>Column 1 Activity</b>	<b>Column 2 Rating</b>
9	An activity mentioned in regulation 61.1255	Flight examiner rating

**61.380** Limitations on exercise of privileges of pilot licences—flight activity and design feature endorsements

- (1) The holder of a pilot licence is authorised to conduct a flight activity mentioned in column 2 of an item in table 61.1145 only if the holder also holds the endorsement mentioned in column 1 of the item.
- (2) The holder of a pilot licence is authorised to exercise the privileges of the licence in an aircraft that has a design feature mentioned in regulation 61.755 for the aircraft only if the holder also holds the design feature endorsement for the design feature.

*Aeroplanes*

- (2) The following design features on an aeroplane require a design feature endorsement:
  - (a) tailwheel undercarriage;
  - (b) retractable undercarriage;
  - (c) manual propeller pitch control (piston engine);
  - (d) gas turbine engine;
  - (e) multi-engine centre-line thrust;
  - (f) pressurisation system;
  - (g) floatplane;
  - (h) floating hull;
  - (i) ski landing gear.

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- (1B) The holder is authorised to exercise the privileges of his or her pilot licence in an activity in an aircraft under the rating or endorsement only if the holder is competent in operating the aircraft in the activity to the standards mentioned in the Part 61 Manual of Standards (if any) for:
- (a) the class or type to which the aircraft belongs; and
  - (b) the activity.
- (2) The holder of a pilot licence is authorised to exercise the privileges of the licence in an aircraft that has an operative airborne collision avoidance system only if the holder is competent in the use of an airborne collision avoidance system to the standards mentioned in the Part 61 Manual of Standards.

**61.390 Limitations on exercise of privileges of pilot licences—operating requirements and limitations**

- (1) The holder of a pilot licence is not authorised to conduct an activity in the exercise of the privileges of the licence in an aircraft if:
- (a) engaging in the activity is a prescribed purpose for subsection 27(9) of the Act; and
  - (b) the operator of the aircraft does not hold an AOC that authorises the conduct of the activity.
- (2) The holder of a pilot licence is not authorised to conduct an activity in the exercise of the privileges of the licence if the conduct of the activity would be an offence against the Act or another provision of these Regulations.

**61.395 Limitations on exercise of privileges of pilot licences—recent experience for certain passenger flight activities**

- (1) The holder of a pilot licence is authorised to pilot, during take-off or landing, an aircraft of a particular category carrying a passenger by day only if the holder has, within the previous 90 days, in an aircraft of that category or an approved flight simulator for the purpose, conducted, by day or night:
- (a) at least 3 take-offs; and
  - (b) at least 3 landings;

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while controlling the aircraft or flight simulator.

- (2) The holder of a pilot licence is authorised to pilot, during take-off or landing, an aircraft of a particular category carrying a passenger at night only if the holder has, within the previous 90 days, in an aircraft of that category or an approved flight simulator for the purpose, conducted, at night:
- (a) at least 3 take-offs; and
  - (b) at least 3 landings;
- while controlling the aircraft or flight simulator.
- (3) For paragraphs (1)(a) and (2)(a), each take-off must be followed by a climb to at least 500 ft AGL.
- (4) The holder is taken to meet the requirements of subregulation (1) if:
- (a) within the previous 90 days, in an aircraft of that category or an approved flight simulator for the purpose, the holder has:
    - (i) successfully completed a relevant check or review; or
    - (ii) passed a flight test for a pilot licence or a rating on a pilot licence;
 that includes at least one take-off and at least one landing; or
  - (b) both:
    - (i) the holder is successfully participating in an operator's training and checking system for an operation in an aircraft of that category; and
    - (ii) the operator holds an approval under regulation 61.040 for the system for this subregulation and operations in aircraft of that category.
- (5) Also, the holder is taken to meet the requirements of subregulation (2) if:
- (a) within the previous 90 days, in an aircraft of that category or an approved flight simulator for the purpose, the holder has:
    - (i) successfully completed a relevant check or review; or
    - (ii) passed a flight test for a pilot licence or a rating on a pilot licence;
 that includes at least one take-off, and at least one landing, at night; or

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- (b) both:
  - (i) the holder is successfully participating in an operator's training and checking system for an operation at night in an aircraft of that category; and
  - (ii) the operator holds an approval under regulation 61.040 for the system for this subregulation and operations in aircraft of that category.
- (6) In this regulation:

*relevant check or review* means any of the following:

  - (a) an instrument proficiency check;
  - (b) a night vision imaging system proficiency check;
  - (c) an instructor proficiency check;
  - (d) an operator proficiency check;
  - (e) a flight review.

**61.400 Limitations on exercise of privileges of pilot licences—flight review**

- (1) For this Part, successful completion of a flight review for a rating on a pilot licence requires demonstration, to a person mentioned in subregulation (2), that the holder of the rating is competent in each unit of competency mentioned in the Part 61 Manual of Standards for the rating.
- (2) For subregulation (1), the persons are as follows:
  - (a) CASA;
  - (b) the holder of an approval under regulation 61.040 for this regulation;
  - (c) a pilot instructor who is authorised to conduct a flight review for the rating.
- (3) The flight review must be conducted in:
  - (a) an aircraft that can be flown under the rating; or
  - (b) an approved flight simulator for the flight review.

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**61.405 Limitations on exercise of privileges of pilot licences—  
medical requirements—recreational pilot licence holders**

- (1) The holder of a recreational pilot licence is authorised to exercise the privileges of the licence only if:
- (a) the holder also holds a current class 1 or 2 medical certificate; or
  - (b) the holder:
    - (i) also holds a current recreational aviation medical practitioner's certificate; and
    - (ii) meets the requirements mentioned in subregulation (2); or
  - (c) the holder also holds a medical exemption for the exercise of the privileges of the licence.
- (2) For subparagraph (1)(b)(ii), the requirements are as follows:
- (a) the holder must have:
    - (i) given CASA a copy of the holder's recreational aviation medical practitioner's certificate; and
    - (ii) received from CASA a written acknowledgement of the receipt of the copy;
  - (b) while exercising the privileges of the licence in an aircraft, the holder must carry both of the following on the aircraft:
    - (i) the certificate;
    - (ii) the acknowledgement mentioned in subparagraph (a)(ii);
  - (c) the holder must comply with any limitations or conditions stated on the certificate;
  - (d) the holder must meet the modified Austroads medical standards.

Note: For when a person meets the modified Austroads medical standards, see regulation 67.262.

- (3) In this regulation:

**current:** a recreational aviation medical practitioner's certificate for the holder of a recreational pilot licence is **current** for the shortest of the following periods:

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- (a) the period beginning on the day the certificate was signed by the medical practitioner and ending 24 months after that day;
- (b) if, when the holder exercises the privileges of the licence, the holder is at least 65—the period beginning on the day the certificate was signed by the medical practitioner and ending 12 months after that day;
- (c) if the certificate states the period for which it applies—the period beginning on the day the certificate was signed by the medical practitioner and ending at the end of the stated period.

Note: A licence holder must not exercise the privileges of his or her licence during any period of temporary medical unfitness that could render the holder unable to exercise those privileges safely: see regulation 67.270.

**61.410 Limitations on exercise of privileges of pilot licences—  
medical certificates: private pilot licence holders**

- (1) The holder of a private pilot licence is authorised to exercise the privileges of the licence only if the holder also holds:
  - (a) a current class 1 or 2 medical certificate; or
  - (b) a medical exemption for the exercise of the privileges of the licence.
- (2) However, subject to subregulation (3), the holder of a private pilot licence is authorised to exercise the privileges of the licence in a recreational aircraft if:
  - (a) the holder:
    - (i) also holds a current recreational aviation medical practitioner's certificate; and
    - (ii) meets the requirements mentioned in subregulation 61.405(2); and
  - (b) the flight is conducted by day under the VFR.
- (3) Regulation 61.465 applies to the holder as if each reference in that regulation to a recreational pilot licence included a reference to a private pilot licence.

Note: A licence holder must not exercise the privileges of his or her licence during any period of temporary medical unfitness that could render the

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holder unable to exercise those privileges safely: see regulation 67.270.

**61.415 Limitations on exercise of privileges of pilot licences—  
medical certificates: commercial, multi-crew and air  
transport pilot licence holders**

- (1) The holder of a commercial pilot licence, multi-crew pilot licence or air transport pilot licence is authorised to exercise the privileges of the licence only if the holder also holds:
  - (a) a current class 1 medical certificate; or
  - (b) a medical exemption for the exercise of the privileges of the licence.
- (2) However, the holder of a commercial pilot licence or air transport pilot licence is authorised to exercise the privileges of the licence in an activity that would be authorised by a private pilot licence if the holder also holds a current class 2 medical certificate.
- (3) Also, the holder of a commercial pilot licence or air transport pilot licence is authorised to exercise the privileges of the licence in an activity that would be authorised by a recreational pilot licence if the holder:
  - (a) also holds a current recreational aviation medical practitioner's certificate; and
  - (b) meets the requirements mentioned in subregulation 61.405(2).

Note: A licence holder must not exercise the privileges of his or her licence during any period of temporary medical unfitness that could render the holder unable to exercise those privileges safely: see regulation 67.270.

**61.420 Limitations on exercise of privileges of pilot licences—  
carriage of documents**

The holder of a pilot licence is authorised to exercise the privileges of the licence on a flight only if the holder carries the following documents on the flight:

- (a) his or her licence document;

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- (b) if the holder holds a current class 1 or 2 medical certificate—the medical certificate;
- (c) if the holder holds a recreational aviation medical practitioner's certificate:
  - (i) the medical practitioner's certificate; and
  - (ii) the acknowledgement of receipt mentioned in paragraph 61.405(2)(a);
- (ca) if the holder holds a medical exemption for the flight—a copy of the medical exemption;
- (d) a document that includes a photograph of the holder showing the holder's full face and his or her head and shoulders:
  - (i) that was issued within the previous 10 years by the government, or a government authority, of:
    - (A) the Commonwealth or a State or Territory; or
    - (B) a foreign country, or a state or province (however described) of a foreign country; and
  - (ii) that has not expired or been cancelled.

**61.422 Limitations on exercise of privileges of pilot licences—  
aviation English language proficiency**

- (1) The holder of a pilot licence other than a recreational pilot licence is authorised to exercise the privileges of the licence only if the holder has a current aviation English language proficiency assessment.
- (2) Subregulation (3) applies to the holder of a pilot licence that was granted on the basis of regulation 202.272 if the licence was granted in recognition of a continued authorisation (within the meaning of regulation 202.261) that was granted on or before 4 March 2008.
- (3) Subregulation (1) does not apply to the holder in relation to the exercise of the privileges of his or her licence in Australian Territory.

## **Division 61.E.2—General authorisations for pilot licences**

### **61.430 Holders of pilot licences authorised to taxi aircraft**

- (1) A person is authorised to taxi an aircraft of a particular class or type if the person holds:
  - (a) a pilot licence; and
  - (b) the category rating for the category to which aircraft of that class or type belong; and
  - (c) the class rating or type rating for aircraft of that class or type.
- (2) For regulations 61.405 to 61.415, taxiing an aircraft does not constitute the exercise of the privileges of a licence.

Note: See regulation 229 of CAR for an offence relating to taxiing aircraft without being authorised to do so.

### **61.435 When holders of pilot licences authorised to operate aircraft radio**

- (1) A person is authorised to transmit on a radio frequency of a kind used for the purpose of ensuring the safety of air navigation if the person:
  - (a) holds a private pilot licence, commercial pilot licence, multi-crew pilot licence or air transport pilot licence; or
  - (b) holds a recreational pilot licence with a flight radio endorsement.
- (3) For regulations 61.405 to 61.415, transmitting on a radio frequency of a kind used for the purpose of ensuring the safety of air navigation does not constitute the exercise of the privileges of a licence.

Note: A person is prohibited from transmitting on a radio frequency of a kind used for the purpose of ensuring the safety of air navigation unless the person is qualified to do so: see regulation 83 of CAR.

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*authorising Part 141 or 142 operator*, in relation to an instructor approving a solo flight, means the Part 141 or 142 operator who authorised the instructor to approve the solo flight.

**61.1227 Obligations of pilot instructors—approval to operate aircraft radio**

- (1) A pilot instructor commits an offence if:
- (a) the instructor approves a person who does not hold a flight crew licence, or who holds a recreational pilot licence but does not hold a flight radio endorsement, (the *student*) to transmit on a radio frequency of a kind used for the purpose of ensuring the safety of air navigation; and
  - (b) the student does not meet the requirement mentioned in subregulation (2).

Penalty: 50 penalty units.

- (2) For paragraph (1)(b), the requirement is that:
- (a) the student has been assessed by CASA or an examiner as meeting the general English language proficiency standard mentioned in the Part 61 Manual of Standards; or
  - (b) the student has completed an approved course of training in English language proficiency.
- (3) An offence against this regulation is an offence of strict liability.

**61.1230 Obligations of pilot instructors—records of activities conducted independently of Part 141 or 142 operator**

- (1) A pilot instructor commits an offence if:
- (a) the instructor conducts a flight review or a session of flight training for a flight crew endorsement, other than an endorsement on an operational rating; and
  - (b) the training is not conducted on behalf of a Part 141 or 142 operator; and
  - (c) a record of the training is not made within 7 days after the session.

Penalty: 50 penalty units.

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**Division 61.G.1** Privileges and grant of licences

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## **Subpart 61.G—Recreational pilot licences**

### **Division 61.G.1—Privileges and grant of licences**

#### **61.460 Privileges of recreational pilot licences**

Subject to Subpart 61.E and regulations 61.465 and 61.470, the holder of a recreational pilot licence is authorised to pilot a single-engine aircraft as pilot in command or co-pilot if:

- (a) the aircraft is certificated for single-pilot operation; and
- (b) the aircraft has a maximum certificated take-off weight of not more than 1 500 kg; and
- (c) the aircraft is not rocket-powered or turbine-powered; and
- (d) the flight is conducted by day under the VFR; and
- (e) either:
  - (i) the aircraft is engaged in a private operation; or
  - (ii) the holder is receiving flight training.

Note 1: Subpart 61.E sets out certain limitations that apply to all pilot licences, and ratings and endorsements on pilot licences.

Note 2: The holder of a recreational pilot licence is also authorised to taxi an aircraft in certain circumstances: see regulation 61.430.

Note 3: The holder of a recreational pilot licence is also authorised to transmit on a radio frequency of a kind used for the purpose of ensuring the safety of air navigation if the holder also holds a flight radio endorsement: see regulation 61.435.

#### **61.465 Limitations on exercise of privileges of recreational pilot licences—general**

- (1) The holder of a recreational pilot licence is authorised to pilot an aircraft in a Contracting State's airspace only if the holder has the permission (however described) of the Contracting State to do so.
- (2) The holder of a recreational pilot licence is authorised to pilot an aircraft carrying more than one passenger only if the holder:
  - (a) also holds a current class 1 or 2 medical certificate; or
  - (b) is accompanied by another pilot who:

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- (i) holds a current class 1 or 2 medical certificate; and
  - (ii) occupies a flight control seat in the aircraft; and
  - (iii) is authorised to pilot the aircraft.
- (3) The holder of a recreational pilot licence is authorised to pilot an aircraft above 10 000 ft above mean sea level only if the holder:
- (a) also holds a current class 1 or 2 medical certificate; or
  - (b) is accompanied by another pilot who:
    - (i) holds a current class 1 or 2 medical certificate; and
    - (ii) occupies a flight control seat in the aircraft; and
    - (iii) is authorised to pilot the aircraft.

**61.470 Limitations on exercise of privileges of recreational pilot licences—endorsements**

- (1) The holder of a recreational pilot licence is authorised to pilot an aircraft outside the following areas only if the holder also holds a recreational navigation endorsement:
- (a) the area within 25 nautical miles of the departure aerodrome;
  - (b) a flight training area;
  - (c) the area that is a direct route between the departure aerodrome and a flight training area.
- (2) The holder of a recreational pilot licence is authorised to pilot an aircraft in controlled airspace only if the holder also holds a controlled airspace endorsement.
- (3) The holder of a recreational pilot licence is authorised to pilot an aircraft at a controlled aerodrome only if the holder also holds a controlled aerodrome endorsement.

**61.475 Requirements for grant of recreational pilot licences**

- (1) An applicant for a recreational pilot licence must be at least 16.
- (2) Subject to regulation 61.480, the applicant must also have:
- (a) passed the aeronautical knowledge examination for a recreational pilot licence and the associated aircraft category rating; and

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- (b) completed flight training for a recreational pilot licence and the associated aircraft category rating; and
- (c) passed the flight test mentioned in the Part 61 Manual of Standards for a recreational pilot licence and the associated aircraft category rating; and
- (d) completed at least 25 hours of flight time as pilot of an aircraft of the category for which the associated aircraft category rating is sought, including:
  - (i) at least 20 hours of dual flight; and
  - (ii) at least 5 hours of solo flight time.

Note 1: For paragraph (a), for the conduct of aeronautical knowledge examinations, see Division 61.B.3.

Note 2: For paragraph (b), for the requirements for flight training, see Division 61.B.2.

Note 3: For paragraph (c), for the conduct of flight tests, see Division 61.B.4.

Note 4: For paragraph (d), for the determination of a person's flight time and other aeronautical experience, see Division 61.A.2.

- (3) Despite paragraph 61.245(1)(a), the flight test must be conducted in an aircraft.
- (4) The applicant is taken to meet the requirements of subregulation (2) if the applicant holds a private pilot licence, commercial pilot licence or air transport pilot licence.

**61.480 Grant of recreational pilot licences in recognition of pilot certificates granted by certain organisations**

- (1) This regulation applies to an applicant for a recreational pilot licence if:
  - (a) the applicant holds a pilot certificate, granted by a recreational aviation administration organisation that administers activities involving aircraft of a particular category; and
  - (b) the certificate permits the holder to act as the pilot in command of an aircraft of that category.
- (2) For subregulation 61.475(2), the applicant is taken to have passed:
  - (a) the aeronautical knowledge examination; and

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- (b) the flight test;  
for the licence and the associated aircraft category rating.
- (3) The applicant is also taken to have met the requirements for the grant of:
- (a) the aircraft category rating for each category of aircraft in which the person is permitted by the certificate to act as pilot in command; and
  - (b) the aircraft class rating for each class of aircraft in which the person is permitted by the certificate to act as pilot in command; and
  - (c) the design feature endorsement for each design feature of an aircraft in which the applicant is permitted by the certificate to act as pilot in command.

Note: The holder of an aircraft class rating must successfully complete a flight review for the rating to be authorised to exercise the privileges of the rating, and is not taken to have met the flight review requirement on the basis of being taken to have met the requirements for the grant of the rating under subregulation (3): see subregulation 61.745(4).

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**Division 61.G.2—Recreational pilot licence endorsements****61.485 Kinds of recreational pilot licence endorsements**

The following are recreational pilot licence endorsements:

- (a) a controlled aerodrome endorsement;
- (b) a controlled airspace endorsement;
- (c) a flight radio endorsement;
- (d) a recreational navigation endorsement.

**61.490 Privileges of recreational pilot licence endorsements**

- (1) Subject to Subpart 61.E, the holder of a recreational pilot licence with a controlled aerodrome endorsement is authorised to pilot an aircraft, as pilot in command, at a controlled aerodrome.
- (2) Subject to Subpart 61.E, the holder of a recreational pilot licence with a controlled airspace endorsement is authorised to pilot an aircraft, as pilot in command, in controlled airspace.
- (3) Subject to Subpart 61.E, the holder of a recreational pilot licence with a flight radio endorsement is authorised to operate an aircraft radio on the ground or in flight to transmit on a radio frequency of a kind used for the purpose of ensuring the safety of air navigation.
- (4) Subject to Subpart 61.E, the holder of a recreational pilot licence with a recreational navigation endorsement is authorised to pilot an aircraft, as pilot in command, on a cross-country flight.

Note: Subpart 61.E sets out certain limitations that apply to all pilot licences, and ratings and endorsements on pilot licences.

**61.495 Requirements for grant of recreational pilot licence endorsements**

- (1) This regulation applies to a person other than a person who is eligible to be granted a recreational pilot licence endorsement under regulation 61.500.
- (2) An applicant for a recreational pilot licence endorsement must:

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- (a) have passed the aeronautical knowledge examination for the endorsement; and
- (b) have completed flight training for the endorsement; and
- (c) if the endorsement is a recreational navigation endorsement—have completed, in addition to the flight time mentioned in paragraph 61.475(2)(d):
  - (i) at least 5 hours of solo cross-country flight time; and
  - (ii) at least 2 hours of dual instrument time, 1 hour of which is conducted during dual instrument flight time; and
- (d) if the endorsement is a flight radio endorsement—have a current aviation English language proficiency assessment.

Note 1: For paragraph (a), for the conduct of aeronautical knowledge examinations, see Division 61.B.3.

Note 2: For paragraph (b), for the requirements for flight training, see Division 61.B.2.

- (3) The cross-country flight time required by paragraph (2)(c) must include a flight of at least 100 nautical miles, during which a full-stop landing is made at each of 2 aerodromes or landing areas, other than the one from which the flight began.

### **61.500 Grant of endorsement in recognition of other qualifications**

- (1) An applicant for a recreational pilot licence endorsement is eligible to be granted the endorsement if the applicant:
  - (a) holds a recreational pilot licence; and
  - (b) holds another flight crew licence that authorises the exercise of the privileges of the endorsement.
- (2) An applicant for a controlled aerodrome endorsement is eligible to be granted the endorsement if:
  - (a) regulation 61.480 applies to the applicant; and
  - (b) the applicant holds an approval from the recreational aviation administration organisation to pilot an aircraft at a controlled aerodrome.
- (3) An applicant for a controlled airspace endorsement is eligible to be granted the endorsement if:
  - (a) regulation 61.480 applies to the applicant; and

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- (b) the applicant holds an approval from the recreational aviation administration organisation to pilot an aircraft in controlled airspace.
- (4) An applicant for a flight radio endorsement is eligible to be granted the endorsement if:
  - (a) regulation 61.480 applies to the applicant; and
  - (b) the applicant holds an approval from the recreational aviation administration organisation to operate an aircraft radio; and
  - (c) the applicant has a current aviation English language proficiency assessment.
- (5) An applicant for a recreational navigation endorsement is eligible to be granted the endorsement if:
  - (a) regulation 61.480 applies to the applicant; and
  - (b) the applicant holds a cross-country navigation approval from the recreational aviation administration organisation; and
  - (c) the applicant has completed the following flight time that complies with subregulation 61.495(3):
    - (i) at least 5 hours of solo cross-country flight time;
    - (ii) at least 2 hours of dual instrument time, 1 hour of which is conducted during dual instrument flight time.

## **Subpart 61.H—Private pilot licences**

### **Division 61.H.1—General**

#### **61.505 Privileges of private pilot licences**

Subject to Subpart 61.E and regulation 61.510, the holder of a private pilot licence is authorised to pilot an aircraft as pilot in command or co-pilot if:

- (a) the aircraft is engaged in a private operation; or
- (b) the holder is receiving flight training.

Note 1: Subpart 61.E sets out certain limitations that apply to all pilot licences, and ratings and endorsements on pilot licences.

Note 2: The holder of a private pilot licence is also authorised to taxi an aircraft in certain circumstances: see regulation 61.430.

Note 3: The holder of a private pilot licence is also authorised to transmit on a radio frequency of a kind used for the purpose of ensuring the safety of air navigation: see regulation 61.435.

#### **61.510 Limitations on exercise of privileges of private pilot licences—multi-crew operations**

- (1) On and after 1 September 2015, the holder of a private pilot licence is authorised to exercise the privileges of the licence in a multi-crew operation only if the holder has completed an approved course of training in multi-crew cooperation.
- (2) The holder of a private pilot licence that was granted on the basis of regulation 202.272 is taken to meet the requirement mentioned in subregulation (1) if, before 1 September 2015, the holder conducted a multi-crew operation.

#### **61.515 Requirements for grant of private pilot licences—general**

- (1) An applicant for a private pilot licence must be at least 17.
- (2) The applicant must also have:

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- (a) passed the aeronautical knowledge examination for the private pilot licence and the associated aircraft category rating; and
- (b) completed flight training for the private pilot licence and the associated aircraft category rating; and
- (c) passed the flight test mentioned in the Part 61 Manual of Standards for the private pilot licence and the associated aircraft category rating; and
- (d) met the aeronautical experience requirements mentioned in Division 61.H.2 or 61.H.3.

Note 1: For paragraph (a), for the conduct of aeronautical knowledge examinations, see Division 61.B.3.

Note 2: For paragraph (b), for the requirements for flight training, see Division 61.B.2.

Note 3: For paragraph (c), for the conduct of flight tests, see Division 61.B.4.

Note 4: For paragraph (d), for the determination of a person's flight time and other aeronautical experience, see Division 61.A.2.

- (3) Despite paragraph 61.245(1)(a), the flight test must be conducted in an aircraft.
- (4) An applicant who meets the requirements for the grant of a commercial pilot licence is taken to meet the requirements for the grant of a private pilot licence.

## **Subpart 61.I—Commercial pilot licences**

### **Division 61.I.1—General**

#### **61.570 Privileges of commercial pilot licences**

Subject to Subpart 61.E and regulation 61.575, the holder of a commercial pilot licence is authorised:

- (a) to pilot, as pilot in command, any aircraft in any operation, other than:
  - (i) a multi-crew aircraft in a charter or regular public transport operation; or
  - (ii) an aeroplane certificated for single-pilot operation, that has a maximum certificated take-off weight of more than 5 700 kg, in a regular public transport operation; or
  - (iii) a turbojet aeroplane with a maximum certificated take-off weight of more than 3 500 kg in a regular public transport operation; and
- (b) to pilot, as co-pilot, any aircraft in any operation.

Note 1: Subpart 61.E sets out certain limitations that apply to all pilot licences, and ratings and endorsements on pilot licences.

Note 2: The holder of a commercial pilot licence is also authorised to taxi an aircraft in certain circumstances: see regulation 61.430.

Note 3: The holder of a commercial pilot licence is also authorised to transmit on a radio frequency of a kind used for the purpose of ensuring the safety of air navigation: see regulation 61.435.

#### **61.575 Limitations on exercise of privileges of commercial pilot licences—multi-crew operations**

- (1) On and after 1 September 2015, the holder of a commercial pilot licence is authorised to exercise the privileges of the licence in a multi-crew operation only if the holder has completed an approved course of training in multi-crew cooperation.
- (2) The holder of a commercial pilot licence that was granted on the basis of regulation 202.272 is taken to meet the requirement

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mentioned in subregulation (1) if, before 1 September 2015, the holder conducted a multi-crew operation.

**61.580 Requirements for grant of commercial pilot licences—  
general**

- (1) An applicant for a commercial pilot licence must be at least 18.
  - (2) The applicant must also have:
    - (a) passed the aeronautical knowledge examination for the commercial pilot licence and the associated aircraft category rating; and
    - (b) completed flight training for the commercial pilot licence and the associated aircraft category rating; and
    - (c) passed the flight test mentioned in the Part 61 Manual of Standards for the commercial pilot licence and the associated aircraft category rating; and
    - (d) met the aeronautical experience requirements mentioned in Division 61.I.2 or 61.I.3.
- Note 1: For paragraph (a), for the conduct of aeronautical knowledge examinations, see Division 61.B.3.
- Note 2: For paragraph (b), for the requirements for flight training, see Division 61.B.2.
- Note 3: For paragraph (c), for the conduct of flight tests, see Division 61.B.4.
- Note 4: For paragraph (d), for the determination of a person's flight time and other aeronautical experience, see Division 61.A.2.
- (3) Despite paragraph 61.245(1)(a), the flight test must be conducted in an aircraft.
  - (4) The applicant is taken to meet the requirements of paragraph (2)(b) if the applicant holds an air transport pilot licence with the associated aircraft category rating.

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**Division 61.I.2—Aeronautical experience requirements for  
commercial pilot licences—applicants who have  
completed integrated training courses****61.585 Application of Division 61.I.2**

This Division applies to an applicant for a commercial pilot licence who has completed an integrated training course for the licence and the associated aircraft category rating.

**61.590 Aeronautical experience requirements for grant of  
commercial pilot licences—aeroplane category**

- (1) An applicant for a commercial pilot licence with the aeroplane category rating must have at least 150 hours of aeronautical experience that includes:
  - (a) at least 140 hours of flight time as pilot of an aeroplane; and
  - (b) at least 70 hours of flight time as pilot in command of an aeroplane; and
  - (c) at least 20 hours of cross-country flight time as pilot in command of an aeroplane; and
  - (d) at least 10 hours of instrument time; and
  - (e) at least 5 hours of instrument flight time in an aeroplane.
- (2) Any of the required aeronautical experience that is not completed as flight time as a pilot must be completed as simulated flight time in an approved flight simulation training device for the purpose.
- (3) The cross-country flight time required by paragraph (1)(c) must include a flight of at least 300 nautical miles during which a full-stop landing is made at each of 2 aerodromes not within the flight training area for the aerodrome from which the flight began.
- (4) The flight time in an aeroplane required by subregulation (1) must be completed in a registered or recognised aeroplane.

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**61.595 Aeronautical experience requirements for grant of  
commercial pilot licences—helicopter category**

- (1) An applicant for a commercial pilot licence with the helicopter category rating must have at least 100 hours of aeronautical experience that includes:
  - (a) at least 90 hours of flight time as pilot of a helicopter; and
  - (b) at least 35 hours of flight time as pilot in command of a helicopter; and
  - (c) at least 10 hours of cross-country flight time as pilot in command of a helicopter; and
  - (d) at least 10 hours of instrument time; and
  - (e) at least 5 hours of instrument flight time in a helicopter.
- (2) Any of the required aeronautical experience that is not completed as flight time as a pilot must be completed as:
  - (a) simulated flight time in an approved flight simulation training device for the purpose; or
  - (b) tethered flight time.
- (3) However, no more than 5 hours of the required aeronautical experience may be completed as tethered flight time.
- (4) The cross-country flight time required by paragraph (1)(c) must include a flight of at least 150 nautical miles during which a landing is made at each of 2 landing areas, other than the one from which the flight began.
- (5) The flight time in a helicopter required by subregulation (1) must be completed in a registered or recognised helicopter.

**61.600 Aeronautical experience requirements for grant of  
commercial pilot licences—powered-lift aircraft category**

- (1) An applicant for a commercial pilot licence with the powered-lift aircraft category rating must have at least 150 hours of aeronautical experience that includes:
  - (a) at least 140 hours of flight time as pilot of a powered-lift aircraft; and

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applicants who have completed integrated training courses**Regulation 61.600**

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- (b) at least 50 hours of flight time as pilot in command of a powered-lift aircraft; and
  - (c) at least 10 hours of cross-country flight time as pilot in command of a powered-lift aircraft; and
  - (d) at least 10 hours of instrument time; and
  - (e) at least 5 hours of instrument flight time in a powered-lift aircraft.
- (2) Any of the required aeronautical experience that is not completed as flight time as a pilot must be completed as:
- (a) simulated flight time in an approved flight simulation training device for the purpose; or
  - (b) tethered flight time.
- (3) However, no more than 5 hours of the required aeronautical experience may be completed as tethered flight time.
- (4) The cross-country flight time required by paragraph (1)(c) must include a flight of at least 300 nautical miles during which a full-stop landing is made at each of 2 landing areas, other than the one from which the flight began.
- (5) The flight time in a powered-lift aircraft required by subregulation (1) must be completed in a registered or recognised powered-lift aircraft.

**Division 61.I.3—Aeronautical experience requirements for commercial pilot licences—applicants who have not completed integrated training courses**

**61.605 Application of Division 61.I.3**

This Division applies to an applicant for a commercial pilot licence who has not completed an integrated training course for the licence and the associated aircraft category rating.

**61.610 Aeronautical experience requirements for grant of commercial pilot licences—airplane category**

- (1) An applicant for a commercial pilot licence with the airplane category rating must have at least 200 hours of aeronautical experience that includes:
  - (a) at least 190 hours of flight time as a pilot; and
  - (b) at least 100 hours of flight time as pilot in command of an airplane; and
  - (c) at least 20 hours of cross-country flight time as pilot in command of an airplane; and
  - (d) at least 10 hours of instrument time; and
  - (e) at least 5 hours of instrument flight time in an airplane.
- (2) Any of the required aeronautical experience that is not completed as flight time as a pilot must be completed as simulated flight time in an approved flight simulation training device for the purpose.
- (3) The cross-country flight time required by paragraph (1)(c) must include a flight of at least 300 nautical miles during which a full-stop landing is made at each of 2 aerodromes not within the flight training area for the aerodrome from which the flight began.

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**61.615 Aeronautical experience requirements for grant of  
commercial pilot licences—helicopter category**

- (1) An applicant for a commercial pilot licence with the helicopter category rating must have at least 150 hours of aeronautical experience that includes:
  - (a) at least 140 hours of flight time as a pilot; and
  - (b) at least 70 hours of flight time as pilot of a helicopter; and
  - (c) at least 35 hours of flight time as pilot in command of a helicopter; and
  - (d) at least 10 hours of cross-country flight time as pilot in command of a helicopter; and
  - (e) at least 10 hours of instrument time; and
  - (f) at least 5 hours of instrument flight time in a helicopter.
- (2) Any of the required aeronautical experience that is not completed as flight time as a pilot must be completed as:
  - (a) simulated flight time in an approved flight simulation training device for the purpose; or
  - (b) tethered flight time.
- (3) However, no more than 5 hours of the required aeronautical experience may be completed as tethered flight time.
- (4) The cross-country flight time required by paragraph (1)(d) must include a flight of at least 150 nautical miles during which a landing is made at each of 2 landing areas, other than the one from which the flight began.

**61.620 Aeronautical experience requirements for grant of  
commercial pilot licences—powered-lift aircraft category**

- (1) An applicant for a commercial pilot licence with the powered-lift aircraft category rating must have at least 200 hours of aeronautical experience that includes:
  - (a) at least 190 hours of flight time as a pilot; and
  - (b) at least 50 hours of flight time as pilot in command of a powered-lift aircraft; and

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- (c) at least 10 hours of cross-country flight time as pilot in command of a powered-lift aircraft; and
  - (d) at least 10 hours of instrument time; and
  - (e) at least 5 hours of instrument flight time in a powered-lift aircraft.
- (2) Any of the required aeronautical experience that is not completed as flight time as a pilot must be completed as:
    - (a) simulated flight time in an approved flight simulation training device for the purpose; or
    - (b) tethered flight time.
  - (3) However, no more than 5 hours of the required aeronautical experience may be completed as tethered flight time.
  - (4) The cross-country flight time required by paragraph (1)(c) must include a flight of at least 300 nautical miles during which a full-stop landing is made at each of 2 landing areas, other than the one from which the flight began.

**61.625 Aeronautical experience requirements for grant of commercial pilot licences—gyroplane category**

- (1) An applicant for a commercial pilot licence with the gyroplane category rating must have completed at least 150 hours of aeronautical experience that includes:
  - (a) at least 75 hours of flight time as pilot of a gyroplane; and
  - (b) at least 35 hours of flight time as pilot in command of a gyroplane; and
  - (c) at least 20 hours of dual flight in a gyroplane; and
  - (d) at least 20 hours of cross-country flight time as pilot in command of a powered aircraft; and
  - (e) at least 10 hours of cross-country flight time as pilot in command of a gyroplane; and
  - (f) at least 10 hours of dual instrument time in an aircraft or approved flight simulation training device for the purpose.
- (2) The cross-country flight time required by paragraph (1)(e) must include a flight of at least 150 nautical miles during which a

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full-stop landing is made at each of 2 landing areas, other than the one from which the flight began.

**61.630 Aeronautical experience requirements for grant of commercial pilot licences—airship category**

- (1) An applicant for a commercial pilot licence with the airship category rating must have at least 200 hours of aeronautical experience that includes:
  - (a) at least 180 hours of flight time as a pilot; and
  - (b) at least 50 hours of flight time as pilot of an airship; and
  - (c) at least 30 hours of flight time as pilot in command, or pilot in command under supervision, of an airship; and
  - (d) at least 10 hours of cross-country flight time as pilot in command, or pilot in command under supervision, of an airship; and
  - (e) at least 10 hours of flight time at night as pilot in command, or pilot in command under supervision, of an airship; and
  - (f) at least 40 hours of instrument time; and
  - (g) at least 20 hours of instrument flight time; and
  - (h) at least 10 hours of instrument flight time in an airship.
- (2) Any of the required aeronautical experience that is not completed as flight time as a pilot must be completed as simulated flight time in an approved flight simulation training device for the purpose.

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- (B) a foreign country, or a state or province  
(however described) of a foreign country; and
- (ii) that has not expired or been cancelled.
- (3) The holder of a flight crew licence or certificate of validation commits an offence if:
- (a) CASA directs the holder to produce a document under subregulation (1) or (2); and
  - (b) the holder does not produce the document within the period mentioned in subregulation (4).
- Penalty: 50 penalty units.
- (4) For paragraph (3)(b), the period is as follows:
- (a) if, when the direction was given, the holder was exercising, had just finished exercising, or was about to exercise, the privileges of the licence or certificate of validation—immediately;
  - (b) in any other case—7 days after the day the direction is given.
- (5) An offence against this regulation is an offence of strict liability.

**61.345 Personal logbooks—pilots**

- (1) A person who holds a pilot licence, or a certificate of validation of an overseas flight crew licence that is equivalent to a pilot licence, commits an offence if the person does not keep a personal logbook in accordance with this regulation.
- Penalty: 50 penalty units.
- (2) The person must record his or her full name and date of birth in the person's logbook.
- (3) The person must, as soon as practicable after completing each flight, record the following information in the person's logbook for the flight:
- (a) the date the flight began;
  - (b) the type of aircraft;
  - (c) whether it was a single-engine or multi-engine aircraft;
  - (d) the aircraft's nationality and registration marks;

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- (c) the rating for which the flight review was conducted.
- (3) For subparagraph (1)(c)(ii), the notice must state the following:
  - (a) the holder's name and ARN;
  - (b) that the holder has successfully completed the flight review;
  - (c) the date on which the flight review was successfully completed;
  - (d) the rating for which the flight review was conducted;
  - (e) if the flight review was conducted in an aircraft—the aircraft's nationality and registration marks;
  - (f) if the flight review was conducted in a flight simulator—the identifying number for the flight simulator stated on its flight simulator qualification certificate.
- (4) An offence against this regulation is an offence of strict liability.

**61.1225 Obligations of pilot instructors—student pilots**

- (1) A flight instructor commits an offence if:
  - (a) the instructor approves a person to pilot an aircraft as a student pilot; and
  - (b) the approval is to pilot the aircraft in a way that is not authorised by the following provisions:
    - (i) paragraph 61.112(1)(c) or (2)(c) (Flying as a student pilot);
    - (ii) regulation 61.113 (General requirements for student pilots);
    - (iii) regulation 61.114 (Solo flights—medical certificate requirements for student pilots);
    - (iv) regulation 61.115 (Solo flights—recent experience requirements for student pilots).

Penalty: 50 penalty units.

- (2) A flight instructor commits an offence if:
  - (a) the instructor approves a person (the *student*) to conduct a solo flight as a student pilot; and
  - (b) the instructor is not satisfied that the student:
    - (i) has been briefed appropriately for the flight; and

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- (ii) is capable of conducting the flight safely; and
- (iii) meets the requirement mentioned in subregulation (3).

Penalty: 50 penalty units.

- (3) For subparagraph (2)(b)(iii), the requirement is that:
- (a) the student has been assessed by CASA or an examiner as meeting the general English language proficiency standard mentioned in the Part 61 Manual of Standards; or
  - (b) the student has completed an approved course of training in English language proficiency.
- (4) A flight instructor commits an offence if:
- (a) the instructor approves a person (the *student*) to conduct a solo flight of a kind mentioned in subregulation (5) as a student pilot for the first time; and
  - (b) the instructor is not satisfied that the student:
    - (i) has completed the training specified by the authorising Part 141 or 142 operator for the conduct of a solo flight of that kind by a student pilot; and
    - (ii) has been assessed by the Part 141 or 142 operator as competent to conduct the solo flight; and
  - (c) for a cross-country flight or night flight—the student has not completed at least 2 hours of dual instrument time, 1 hour of which is conducted during dual instrument flight time.

Penalty: 50 penalty units.

- (5) For subregulation (4), the kinds of solo flight are as follows:
- (a) a circuit training flight;
  - (b) a flight between an aerodrome and the flight training area for the aerodrome;
  - (c) a cross-country flight;
  - (d) a night flight.
- (6) An offence against subregulation (1) is an offence of strict liability.
- (7) In this regulation:

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## Section 20.2

### Air service operations — safety precautions before flight

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#### 2 Removal of locking and safety devices

- 2.2 Where external control surface locks, undercarriage pins and locks, or other external locking or restricting devices have been fitted, they must, except where otherwise approved by CASA, be removed prior to commencement of taxiing for the purpose of taking off. They must be removed only by the pilot in command or the co-pilot, or by a person instructed in this function and authorised to perform it by the owner, hirer, operator or pilot in command.
- 2.3 Where external control surface locks, undercarriage pins and locks, or other external locking or restricting devices are removed by a person other than the pilot in command or co-pilot:
- 2.3.1 Removal must only be effected as directed by the pilot in command.
- 2.3.2 The locks, pins and other external devices must be exhibited to the pilot in command or co-pilot from a position which will enable him or her to readily determine that all pins, locks and devices are being displayed.
- 2.3.3 During the hours of darkness the owner, hirer, operator or pilot in command must ensure that adequate lighting is provided to enable the pilot in command or co-pilot (as the case may be) to see the articles displayed.
- 2.3.4 When the pilot in command or co-pilot is satisfied that all locking devices have been removed and displayed he or she must give an agreed form of acknowledgement to the person effecting removal.
- 2.3A If any external control surface lock, undercarriage pin or lock, or other external locking or restricting device, fitted to an aircraft:
- (a) has been removed by a person other than the pilot in command of the aircraft; and
  - (b) has not been exhibited to him or her under subparagraph 2.3.2; the pilot in command of the aircraft must not start taxiing the aircraft, or allow the aircraft to be taxied, for the purposes of taking-off unless the co-pilot has told him or her that the lock, pin or other device has been removed:
  - (c) by the co-pilot; or
  - (d) by a person other than the co-pilot in accordance with paragraph 2.3.
- 2.4 When an aircraft has been parked, taxied or towed in winds exceeding 35 knots and the control systems and surfaces have not been effectively restrained either by a person in the cockpit or by approved control surface gust locks, the pilot in command or an appropriately licensed maintenance engineer must, before flight, inspect the control systems and control surface attachments for damage.
- 2.5 Where external control surface locks or restricting devices have been removed as prescribed by paragraphs 2.2 and 2.3 of this section, or where an aircraft is to be flown for the first time following maintenance work involving the aircraft's control surfaces or control surface systems, the pilot in command must, immediately before taxiing for the purpose of taking off, test the flight

controls to the full limit of their travel and make such other tests as are necessary to ensure that those controls are functioning correctly.

*Note* Paragraph 244 (1) (a) of the *Civil Aviation Regulations 1988* requires that immediately before taking-off on any flight, the pilot in command of an aircraft must test the flight controls on the ground to the full limit of their travel and make such other tests as are necessary to ensure that those controls are functioning correctly.

### **3 Security of doors and hatches**

Immediately before taxiing for the purpose of taking off on any flight, the pilot in command must ensure that all doors, escape hatches and loading hatches are properly secured.

### **4 Precautions before solo flight in aircraft fitted with dual controls**

The pilot in command of an aircraft fitted with dual controls, which is to be flown solo, must ensure that safety harness and any other articles or equipment which may foul the controls are safely secured; if the second control column is readily detachable, it must be removed.

### **5 Fuel system inspection**

5.1 The operator and pilot in command must ensure that the following inspections and tests for the presence of water in the fuel system of the aircraft are made:

(a) either:

(i) if:

- (A) the aircraft manufacturer's data specifies the manner in which inspections and tests for the presence of water in the aircraft's fuel system are to be made; and
- (B) the data has been approved under regulation 42M of the *Civil Aviation Regulations 1988* as part of the aircraft's system of maintenance;

an inspection and test in accordance with the approved data; or

(ii) in any other case — before the start of each day's flying, and after each refuelling, with the aircraft standing on a reasonably level surface, drain a small quantity of fuel from each fuel tank into a clear transparent container and check by an approved method for the presence of water;

(b) on such aircraft types which may be specified by CASA, extend the foregoing inspection to fuel system filters and collector boxes. It is recommended that all aircraft fuel system filters and collector boxes be checked for water contamination at frequent intervals.

*Note* It is important that checks for water contamination of fuel drainage samples be positive in nature and do not rely solely on sensory perceptions of colour and smell, both of which can be highly deceptive. The following methods are acceptable:

1. Place a small quantity of fuel into the container before taking samples from tank or filter drain points. The presence of water will then be revealed by a visible surface of demarcation between the two fluids in the container.
2. Check the drainage samples by chemical means such as water detecting paper or paste, where a change in colour of the detecting medium will give clear indication of the presence of water.

3. In the case of turbine fuel samples, tests should also include inspection for persistent cloudiness or other evidence of the presence of suspended water droplets, which will not necessarily be detected by methods mentioned in notes 1 and 2. Should any doubt exist of the suitability of the fuel, the checks specified in the aircraft Operators Maintenance Manual should be followed. It is advisable to allow turbine fuel a reasonable period of stagnation before drawing test samples from fuel drain points; this allows settling of suspended water which is a slower process in turbine fuel than in aviation gasoline.
- 5.1A In relation to a refuelling that is a hot refuelling in accordance with section 20.10 or section 20.10.1, the operator and pilot in command of an aircraft are not required to carry out inspections and tests in accordance with paragraph 5.1. This does not effect the requirement to do so before the start of each day's flying.
- 5.2 If, at any time, a significant quantity of water is found to be present in an aircraft fuel system, the operator and pilot in command must ensure that all traces of it are removed from the fuel system, including the fuel filters, before further flight.
- Note* In eliminating water from an aircraft fuel system, it is important that consideration be given to the possibility of water lying in portions of the tanks or fuel lines where, because of the design of the system or the existing attitude of the aircraft, it is not immediately accessible to a drain point.
- 5.3 The operator and pilot in command must ensure that, before the commencement of each day's flying, all external fuel tank vents are inspected for freedom from obstruction.

## **6 Fuel quantity measurement**

- 6.1 The operator of an aircraft having a maximum take-off weight of more than 5 700 kg and engaged in commercial operations must ensure that the operations manual contains instructions and procedures for the pilot in command of the aircraft to verify the quantity of fuel on board the aircraft before flight.

*Note* See Airworthiness Bulletin 28-002 for advice on instructions and procedures that may be adopted to verify the quantity of fuel on board an aircraft before flight.

**CAO 20.4.6****6 SUPPLEMENTAL OXYGEN REQUIREMENTS FOR UNPRESSURISED AIRCRAFT****Supplemental oxygen for flight crew members**

- 6.1 A flight crew member who is on flight deck duty in an unpressurised aircraft must be provided with, and continuously use, supplemental oxygen at all times during which the aircraft flies above 10 000 feet altitude.
- 6.2 A flight crew member must, in respect of any period during which the member is not on flight deck duty, be provided with the amount of supplemental oxygen that is provided to a crew member in accordance with paragraph 6.3.

**Supplemental oxygen for other crew members**

- 6.3 A crew member (not being a flight crew member on flight deck duty) in an unpressurised aircraft must be provided with supplemental oxygen:
- (a) in respect of any period exceeding 30 minutes during which the aircraft flies between 10 000 feet altitude and Flight Level 120 (both inclusive); and
  - (b) at all times during which the aircraft flies above Flight Level 120; and must use supplemental oxygen at all times during which the aircraft flies above Flight Level 140.

**Supplemental oxygen for passengers**

- 6.4 Where an unpressurised aircraft carrying passengers flies for more than 30 minutes above 10 000 feet altitude and up to and including Flight Level 140, the aircraft must carry sufficient supplemental oxygen to supply:
- (a) 10% of the passengers with oxygen for 30 minutes; or
  - (b) 20% of the passengers with oxygen for 15 minutes.
- 6.5 Where an unpressurised aircraft carrying passengers flies above Flight Level 140, the aircraft must carry sufficient supplemental oxygen to supply each passenger with oxygen during all periods that the aircraft flies above Flight Level 140.

### 3 Fuel and oils

- 3.1 The pilot in command of an aircraft shall ensure that the aircraft is not flown unless the aviation fuel, aircraft engine lubricating oil, aircraft engine power augmentation fluid and aircraft hydraulic system fluid used in connection with the servicing or operation of the aircraft complies with the specification and grade required or approved for the purpose by CASA.

*Note 1* In respect of aircraft engine power augmentation fluid and aircraft hydraulic system fluid the specification and grade specified for a particular purpose in a manual or manuals promulgated by the aircraft or aircraft engine manufacturer may be considered as having been approved by CASA.

*Note 2* The pilot in command may assume that:

- (a) aviation fuel; and
- (b) aircraft engine lubricating oil; and
- (c) aircraft engine power augmentation fluid; and
- (d) aircraft hydraulic system fluid in the aircraft, other than that which he has caused to be delivered into the aircraft, complies with the required specification and grade.

- 3.3 All ground fuel stock shall be carefully checked for the presence of undissolved water before the fuelling operation is commenced.

*Note 1* This precaution is particularly important when handling fuel from drum stocks.

*Note 2* Attention is drawn to the necessity of using a positive method, such as suitable water-detecting paste or paper, in testing for the presence of free water since sensory perceptions of colour and smell, if used alone, can be quite misleading.

*Note 3* In the case of turbine fuels, attention is also drawn to the necessity of watching for signs of cloudiness or other indication of the presence of suspended water droplets which will not necessarily be detected by the means mentioned in Note 2.

- 3.4 All fuel shall be strained or filtered for the removal of free or suspended water and other contaminating matter before entering the aircraft tanks.

*Note* Attention is drawn to the special standards of filtration which may be specified by the manufacturers of certain types of engines. e.g. turbine engines and direct-injection piston engines.

### 4 Fuelling of aircraft

#### 4.1 Location of aircraft

- 4.1.1 During fuelling operations, the aircraft and ground fuelling equipment shall be so located that no fuel tank filling points or vent outlets lie:
- (a) within 5 metres (17 ft) of any sealed building; and
  - (b) within 6 metres (20 ft) of other stationary aircraft; and
  - (c) within 15 metres (50 ft) of any exposed public area; and
  - (d) within 15 metres (50 ft) of any unsealed building in the case of aircraft with a maximum take-off weight in excess of 5 700 kg (12 566 lb) and
  - (e) within 9 metres (30 ft) of any unsealed building in the case of aircraft with a maximum take-off weight not exceeding 5 700 kg (12 566 lb).

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- 4.1.1.1 Notwithstanding the contents of paragraph 4.1.1 limited fuelling operations for maintenance purposes may be carried out in certain hangars under the following conditions:
- (a) refuelling or defuelling of gasoline or wide-cut gasoline type turbine fuel is not permitted;
  - (b) overwing fuelling is not permitted;
  - (c) these operations shall not be permitted in hangars occupied by 2 or more tenants;
  - (d) the operator shall obtain approval from CASA for the detailed procedures under which these operations may be performed. These procedures shall be described in the maintenance manual and shall include the circumstances under which refuelling or defuelling in hangars or maintenance area is permitted, and the maximum volume of fuel involved.

4.1.1.2 For the purpose of this Order, a sealed building is one which all the external part within 15 metres (50 ft) of an aircraft's fuel tank filling points or vent outlets or ground fuelling equipment is of non-flammable materials and has no openings or all openings are closed.

4.1.2 Where the fuelling equipment is not mobile, the aircraft shall be so placed that it can be rapidly moved to a place of safety, and a means of ensuring that this can be done shall be readily available.

*Note* The following operations are not deemed to constitute fuelling operations:

- (a) the drainage of a small quantity of fuel from a fuel system drain point;
- (b) the transfer of fuel from tank to tank within an aircraft making use exclusively of lines and equipment permanently installed in the aircraft.

## 4.2 Fuelling with passengers on board

4.2.1 The operator of an aircraft must ensure that avgas is not loaded onto an aircraft while passengers are on board, or entering or leaving, the aircraft.

4.2.2 The operator of an aircraft that has an underwing fuelling system must ensure that fuel is not loaded onto the aircraft using this system while passengers are on board, or entering or leaving, the aircraft unless the fuel is aviation grade turbine fuel that contains anti-static additive or is loaded in the USA and meets the ASTM D 1655 standard and the following conditions are satisfied:

- (a) before the fuel is loaded, all persons who may be on board, or entering or leaving, the aircraft while the fuel is loaded are told that:
  - (i) fuel is to be loaded; and
  - (ii) their seat-belts must not be fastened while the fuel is loaded; and
  - (iii) they must not smoke, use any electrical equipment (other than medical equipment used for treating a patient, the operation of which will not affect the safety of any person on board the aircraft) or do anything else that might cause fuel vapours to ignite during the loading;
- (b) all persons on board, or entering or leaving, the aircraft obey the instructions given under sub-subparagraphs (a) (ii) and (iii);

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- (c) a cabin crew or flight crew member is appointed to perform the following tasks while the fuel is loaded:
  - (i) ensure the safety of the passengers;
  - (ii) maintain discipline inside the aircraft;
  - (iii) supervise any necessary evacuation of the aircraft;
- (d) while the fuel is loaded:
  - (i) the aircraft's "fasten seat belt" signs are turned off; and
  - (ii) the aircraft's "no smoking" signs are turned on; and
  - (iii) the aircraft's emergency lights (if any) are armed;
- (e) while the fuel is loaded, there is at least 1 cabin crew or flight crew member on duty in the aircraft:
  - (i) for every 72 passengers on board the aircraft; or
  - (ii) for every passenger zone in the aircraft in which there are passengers; whichever is more;
- (f) while the fuel is loaded, there is at least 1 cabin crew or flight crew member on duty by at least 1 exit door of each of the aircraft's passenger zones in which there are passengers;
- (g) all cabin crew or flight crew members who are on duty in the aircraft while the fuel is loaded:
  - (i) are prepared for an immediate evacuation; and
  - (ii) supervise the passengers during the loading; and
  - (iii) ensure that the aisles and exits are unobstructed during the loading;
- (h) the areas outside the aircraft that would be used if the aircraft were evacuated are kept clear while the fuel is loaded;
- (k) if the aircraft's engine is running — a member of the aircraft's flight crew is on duty on its flight deck;
- (l) the operator's operations manual sets out:
  - (i) the responsibilities of members of the operating crew who are on duty in the aircraft while fuel is loaded; and
  - (ii) procedures for complying with the requirements of this paragraph.

*Note* An underwing fuelling system is any system that forms part of the aircraft and that allows delivery of fuel to the aircraft without exposing the fuel to the atmosphere during delivery.

- 4.2.3 Subject to paragraph 4.2.4, the operator of an aircraft without an underwing fuelling system must ensure that fuel is not loaded on to the aircraft while passengers are on board, or entering or leaving, the aircraft.
- 4.2.4 The operator of an aircraft that cannot be underwing fuelled may allow fuel to be loaded onto the aircraft while a passenger is on board if:
  - (a) the passenger's medical condition is such that he or she cannot leave the aircraft without assistance; and
  - (b) the aircraft's cabin door is open; and
  - (c) the equipment used for loading or unloading passengers (if any) is in position at the door; and
  - (d) the requirements and conditions set out in paragraph 4.2.2 are satisfied.

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- 4.2.5 If:
- (a) fuel is being loaded onto an aircraft in accordance with paragraph 4.2.2 or 4.2.4; and
  - (b) either:
    - (i) fuel vapour is found inside the aircraft; or
    - (ii) for any other reason it is not safe to continue loading the fuel;
- the aircraft's operator must ensure that the loading of the fuel stops immediately.

### 4.3 Aircraft safety precautions during fuelling operations

- 4.3.1 All engines in the aircraft, including any auxiliary power units, must be shut down, except where CASA is satisfied that the operation of such an engine or auxiliary power unit will not present a hazard and where a statement to that effect, together with any special conditions for operation, is included in the operator's operations manual if such a manual is required.

*Note* For this paragraph, CASA is satisfied if the aircraft flight manual permits operation of such an engine or auxiliary power unit.

- 4.3.2 When an external electrical supply is used, the connections between that supply and the aircraft electrical system shall be made and securely locked before the fuelling operation is connected and shall not be disconnected until the operation has been completed, except that connectors, which provide control to ensure effective engagement before external power can be supplied to the aircraft, need not be locked.
- 4.3.3 A person shall not, and the pilot in command and the operator shall take reasonable steps to ensure that a person does not, during fuelling operations:
- (a) operate or perform maintenance work on the aircraft's radar equipment except that where the fuel is kerosene, operation or maintenance may be carried out provided the radar transmitter is de-activated; or
  - (b) except where the fuel involved is kerosene, carry out maintenance on any electrical, electronic or radio systems within the aircraft or operate such equipment other than the aircraft's interior lighting or electrical apparatus necessary for the fuelling process.
- 4.3.4 For fuelling an aircraft, the following requirements apply:
- (a) before a fuel tank cap is removed, the aircraft and all fuelling equipment must be bonded;
  - (b) if bonding is lost, fuel transfer must be stopped immediately and not resumed until the bond is restored.

*Note* Care must be taken before reconnecting the bonding wire to allow for dissipation of static electricity that may have built up.

- 4.3.4A For paragraph 4.3.4:

***bonded*** means the aircraft and the fuelling equipment have the same electrical potential.

***fuelling*** includes refuelling and defuelling.

***fuelling equipment*** includes mobile fuel tankers, in-ground refuel ports, fuel bowsers, hand pumps, drums, funnels and other loose items of equipment if these are used in the fuelling operation.

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- 4.3.5 All footwear worn by aircraft servicing personnel and persons operating fuelling equipment shall be of a non-sparking type and such persons shall not carry any matches, cigarette lighters or other objects which could represent an ignition hazard.
- 4.3.6 Except where automatic shut-off devices limit the capacity of an aircraft fuel tank, the operator and the pilot in command shall ensure that sufficient airspace remains in each fuel tank to allow for anticipated fuel expansion.
- 4.3.7 When a fuelling operation on an aircraft has been completed, the pilot in command and the operator of the aircraft shall ensure that all fuel and oil tank caps are securely refitted.
- 4.3.8 Aircraft oil tanks shall not be drained or filled when the aircraft is inside a hangar or other building unless the oiling equipment used complies with the provisions of Appendix I to this Order.
- 4.4 Safety precautions external to an aircraft during fuelling operations
- 4.4.1 The area in which fuelling operations are carried out shall be clearly placarded as a 'No Smoking' area and the limits of this area shall be a sealed building or at least 15 metres (50 ft) from the aircraft or ground fuelling equipment.
- 4.4.2 Where mobile fuelling equipment is used, the equipment shall be so placed that it can be rapidly moved in the event of fire.
- 4.4.3 A person shall not, and the pilot in command and the operator shall take reasonable steps to ensure that a person does not, during fuelling operations:
- (a) smoke or use a naked flame within 15 metres (50 ft) of the aircraft and ground fuelling equipment; or
  - (b) except in the case of aircraft, operate an internal combustion engine or any electrical switch, battery, generator, motor or other electrical apparatus within 15 metres (50 ft) of the aircraft's fuel tank filling points or vent outlets, and ground fuelling equipment unless the engine, switch, generator, motor or apparatus complies with the provisions of Appendix I to this Order and has been inspected.
- 4.4.4 At least 2 fire extinguishers of approved type and capacity must be positioned:
- (a) within 15 metres, but not less than 6 metres, from the aircraft and the fuelling equipment; or
  - (b) carried on the fuelling equipment.
- 4.4.5 If the fire extinguishers are carried on the fuelling equipment, they must:
- (a) be fitted with quick release brackets; and
  - (b) be readily available from either side of the equipment; and
  - (c) be located as far as practicable from the vehicle fuel tanks and fuelling points.
- 4.4.6 For paragraph 4.4.4 and 4.4.5, the fire extinguishers may be:
- (a) 60B dry powder fire extinguishers; or
  - (b) an 80B dry powder fire extinguisher and a 20B foam extinguisher; or
  - (c) other fire extinguishers approved by CASA.

*Note* The use of 2 carbon dioxide extinguishers, each with a minimum capacity of 4.5 kg (10 lb), is acceptable for this purpose. Extinguishers of other types and capacities may be approved on application to CASA.

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**4.5 Action in the event of a fire hazard**

- 4.5.1 A fuelling operation shall be suspended and the Airport Fire Service notified when any fuel of a quantity likely to create a fire hazard is spilled on or within 15 metres (50 feet) of the aircraft or ground fuelling equipment, including the bilge of a fuelling barge, and the operation shall not recommence until the fire hazard is removed.
- 4.5.2 A fuelling operation shall be stopped as soon as it becomes apparent that an infringement exists of any of the relevant requirements of this Order.
- 4.5.3 When any fuel of a quantity likely to create a fire hazard is spilled on or within 15 metres (50 ft) of the aircraft or ground fuelling equipment, the pilot in command or, in his absence, the operator shall ensure that:
- (a) passengers remaining on board or in the process of embarking or disembarking are removed to a point at least 15 metres (50 ft) from the spilled fuel; and
  - (b) mobile power units, vehicles and power operated loading devices operating within 15 metres (50 ft) of the spilled fuel are shut down; and
  - (c) maintenance work of any nature on or within the aircraft is suspended and not recommenced until the spilled fuel has been removed.

**4.7 In this subsection:**

***cabin crew member*** means a person who:

- (a) is a member of the operating crew, but not the flight crew, of an aircraft; and
- (b) may be assigned to emergency duties in the aircraft under subsection 12 of section 20.11 of the Civil Aviation Orders.

***passenger zone*** in relation to an aircraft, means an area within the aircraft which has:

- (a) seats for 72 or less passengers; and
- (b) an exit.

**5 Starting and ground operations of engines**

- 5.1 The pilot in command or in his absence any other person responsible for starting or ground operation of an aircraft shall ensure that:
- 5.1.1 In the case of land aircraft, passenger loading equipment to permit rapid evacuation of passengers and crew is kept immediately available during the starting of engines.
- 5.1.2 In the case of seaplanes, water transport of a capacity sufficient to enable rapid evacuation of passengers and crew is immediately available during the starting of engines.
- 5.1.3 Where any fuel or other flammable material is spilled within 15 metres (50 ft) of an aircraft, the aircraft engines shall not be started or operated until the fire hazard has been removed.
- 5.1.4 An aircraft engine shall not be started or operated:
- (a) within 5 metres (17 ft) of any sealed building; or
  - (b) within 8 metres (25 ft) of other aircraft; or

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- (c) within 15 metres (50 ft) of any exposed public area; or
- (d) within 15 metres (50 ft) of any unsealed building in the case of an aircraft with a maximum take-off weight exceeding 5 700 kg (12 566 lb); or
- (e) within 8 metres (25 ft) of any unsealed building in the case of an aircraft with a maximum take-off weight not exceeding 5 700 kg (12 566 lb);

and turbine engines, in addition, shall not be operated within the appropriate distance specified below of any other aircraft, fuelling equipment or exposed public areas which lie to the rear of and within a 15 degree arc either side of the exhaust outlet axis of that engine:

## 2 Definitions

In this section, unless a contrary intention appears:

**handicapped person** means a person requiring special attention because illness, injury, age, congenital malfunction, or other temporary or permanent incapacity or disability makes that person unable without special facilities or assistance to utilise air transport facilities and services as effectively as persons who are not so affected.

**land aircraft** means all aircraft other than amphibious aircraft when operating on water, helicopters equipped with fixed flotation equipment when operating on water, seaplanes and flying boats.

**portable megaphone** means a portable battery-powered megaphone that meets the performance standards set out in paragraph 6A.5.

## 3 Maintenance of emergency and lifesaving equipment

An operator must ensure that emergency and lifesaving equipment, carried or installed in an aircraft to meet the requirements of this section, is maintained in such condition that it will satisfactorily perform its design function.

## 5 Flotation equipment for overwater flights

### 5.1 Life jackets

5.1.1 Aircraft shall be equipped with 1 life jacket for each occupant when the aircraft is over water and at a distance from land:

- (a) in the case of a single engine aircraft — greater than that which would allow the aircraft to reach land with the engine inoperative; and
- (b) in the case of multi-engine aircraft — greater than 50 miles.

*Note 1* For the purposes of this paragraph, **land** shall mean land suitable for an emergency landing.

*Note 2* Except as specified in paragraph 5.1.2 below, the provisions of this paragraph need not apply to land aircraft departing from or landing at an aerodrome in accordance with a normal navigational procedure for departing from or landing at that aerodrome.

5.1.2 Land aircraft that carry passengers and are engaged in:

- (a) regular public transport operations; or
- (b) charter operations;

shall be equipped with a life jacket or flotation device for each occupant on all flights where the take-off or approach path is so disposed over water that in the event of a mishap occurring during the departure or the arrival it is reasonably possible that the aircraft would be forced to land onto water.

5.1.3 Where required by paragraph 5.1.1 or paragraph 5.1.2, a life jacket or individual flotation device shall be stowed at or immediately adjacent to each seat. In addition, sufficient additional life jackets or individual flotation devices shall be carried in easily accessible positions for use by infants or children for whom a life jacket or individual flotation device is not available at or adjacent to their seated position.

5.1.4 Amphibious aircraft when operating on water, helicopters equipped with fixed flotation equipment when operating on water, and all seaplanes and flying boats on all flights shall be equipped with:

- (a) 1 life jacket for each occupant; and
- (a) an additional number of life jackets (equal to at least one-fifth of the total number of occupants) in a readily accessible position near the exits.

5.1.5 Life jackets shall be so stowed in the aircraft that 1 life jacket is readily accessible to each occupant and, in the case of passengers, within easy reach of their seats.

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- 5.1.6 Life jackets must:
- (a) comply with a standard approved by CASA; and
  - (b) be of an inflatable type; and
  - (c) except for an infant life jacket — have a whistle fitted in a suitable stowage.
- 5.1.7 Where life jackets are required to be carried in accordance with subparagraph 5.1.1 (a) each occupant shall wear a life jacket during flight over water. However, occupants of aeroplanes need not wear life jackets during flight above 2 000 feet above the water.
- 5.1.8 Where life jackets are required to be carried in accordance with paragraph 5.1.4 each occupant of a single engine aircraft shall wear a life jacket during flight over water when the aircraft is operated beyond gliding distance from land or water, as appropriate, suitable for an emergency landing. However, occupants need not wear life jackets when the aircraft is taking-off or landing at an aerodrome in accordance with a normal navigational procedure for departing from or arriving at that aerodrome, and occupants of aeroplanes need not wear life jackets during flight above 2 000 feet above the water.
- 5.1.9 Notwithstanding paragraph 5.1.8 above each occupant of a helicopter operating to or from an off-shore landing site located on a fixed platform or vessel shall wear a life jacket during the entire flight over water regardless of the class of operation or the one-engine-inoperative performance capability of the helicopter.

**5.2 Life rafts**

- 5.2.1 An aircraft that is flown over water at a distance from land greater than the permitted distance must carry, as part of its emergency and lifesaving equipment, sufficient life rafts to provide a place in a life raft for each person on board the aircraft.
- 5.2.1.1 For the purposes of paragraph 5.2.1, the permitted distance is:
- (a) in the case of an aircraft that has:
    - (i) 4 engines; or
    - (ii) 3 turbine engines; or
    - (iii) 2 turbine engines and complies with section 20.7.1B;  
a distance equal to 120 minutes at normal cruising speed, or 400 miles, whichever is the less; or
  - (b) in any other case — a distance equal to 30 minutes at normal cruising speed, or 100 miles, whichever is the less.
- 5.2.2 Notwithstanding the requirements of paragraph 5.2.1, CASA may require the carriage of life rafts on such other overwater flights as CASA considers necessary.
- 5.2.3 Life rafts carried in accordance with paragraph 5.2.1 shall be in addition to life jackets carried in accordance with paragraphs 5.1.1 and 5.1.2.
- 5.2.4 Life rafts carried in accordance with this section shall be stowed so as to be readily accessible in the event of a ditching without appreciable time for preparatory procedures. When life rafts are stowed in compartments or containers, such compartments or containers shall be appropriately and conspicuously marked. Where life raft stowages have to be installed in aircraft to meet the requirements of this section, such stowages shall comply with the requirements of Part 101 appropriate to the certification of the aircraft concerned.
- 5.2.5 Life rafts must comply with a standard approved by CASA.

### 5.3 Helicopter flotation systems

- 5.3.1 A single engine helicopter engaged in passenger carrying charter operations shall be equipped with an approved flotation system whenever the helicopter is operated beyond autorotative gliding distance from land. However, when following a helicopter access lane prescribed in AIP-ERSA, or when departing from or landing at a helicopter landing site in accordance with a normal navigational procedure for departing from or landing at that site, an approved flotation system is not required.
- 5.3.2 A single engine helicopter engaged in regular public transport operations shall be equipped with an approved flotation system whenever the helicopter is operated beyond autorotative gliding distance from land.
- 5.3.3 A multi-engine helicopter engaged in passenger carrying charter or regular public transport operations over water and which is not operated in accordance with one-engine-inoperative accountability procedures shall be equipped with an approved flotation system.

## 6 Emergency signalling equipment

- 6.1 An aircraft required to carry life rafts under paragraph 5.2.1 or 5.2.2 must be fitted with, or carry, the following emergency signalling equipment:
- (a) when 1 life raft is carried — at least 1 approved ELT or 1 approved portable ELT;
  - (b) when more than 1 life raft is carried — at least:
    - (i) 1 approved ELT and 1 approved portable ELT; or
    - (ii) 2 approved portable ELTs;
  - (c) a supply of pyrotechnic distress signals.

*Note* If carrying an approved portable ELT to comply with this paragraph, CASA **recommends** an emergency position indicating radio beacon (an EPIRB).

- 6.2 A single engine aircraft must be fitted with, or carry, at least 1 approved ELT or 1 approved portable ELT if it is:
- (a) on a flight over water; and
  - (b) not required to carry a life raft under paragraph 5.2.1 or 5.2.2; and
  - (c) either:
    - (i) not equipped with radio communication equipment; or
    - (ii) not capable of continuous air-ground communication.

*Note* If carrying an approved portable ELT to comply with this paragraph, CASA **recommends** an emergency position indicating radio beacon (an EPIRB).

- 6.3 If an approved portable ELT that is carried is an emergency position indicating radio beacon (an EPIRB), it must be carried:
- (a) in, or adjacent to, a life raft; or
  - (b) adjacent to an emergency exit used for evacuation of the aircraft in an emergency.
- 6.4 If an approved portable ELT that is carried is a personal locator beacon (a PLB), it must be carried:
- (a) on the person of a member of the operating crew; or
  - (b) in, or adjacent to, a life raft; or
  - (c) adjacent to an emergency exit used for evacuation of the aircraft in an emergency.
- 6.5 The pilot in command of an aircraft must not begin a flight, and the operator must ensure that the flight is not begun, if an approved ELT or approved portable ELT on

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board the aircraft for this subsection has not successfully undergone the periodic inspection and testing recommended for it by its manufacturer.

*Note* For the maintenance requirements for emergency locator transmitters see also Part 4A of the *Civil Aviation Regulations 1988*.

6.6 Before an approved ELT or approved portable ELT may be used in an aircraft for this subsection, it must be registered with the Australian Maritime Safety Authority.

6.7 In this subsection:

**approved ELT** has the same meaning as in subregulation 252A (7) of the *Civil Aviation Regulations 1988 (CAR 1988)*.

**approved portable ELT** has the same meaning as in subregulation 252A (7) of CAR 1988.

## **6A Portable megaphones**

6A.1 This subsection applies to an aircraft that:

- (a) is engaged in:
  - (i) regular public transport operations; or
  - (ii) charter operations for the purpose of carrying passengers; and
- (b) has a passenger seating capacity of more than 60 seats; and
- (c) is carrying at least 1 passenger.

6A.2 An aircraft to which this subsection applies must carry:

- (a) if it has a passenger seating capacity of less than 100 seats — 1 portable megaphone; or
- (b) otherwise — 2 portable megaphones.

6A.3 If 1 megaphone is carried in an aircraft under this subsection, it must be kept in a place where it is readily accessible from a crew member's seat.

6A.4 If 2 megaphones are carried in an aircraft under this subsection, they must be distributed through the passenger cabin or cabins so as to be readily accessible to crew members.

6A.5 Each portable megaphone must meet the following performance standards:

- (a) it must be able to perform its function throughout any flight on which it is carried; and
- (b) it must be designed for ease of handling and use with 1 hand; and
- (c) it must have a volume control or adequate acoustic feedback suppression.

## **7 Survival equipment**

7.1 An aircraft shall carry survival equipment for sustaining life appropriate to the area being overflown on the following flights:

- (a) where the carriage of life rafts are required by paragraphs 5.2.1 and 5.2.2;
- (b) during operations within or through the remote areas specified in Appendix III;
- (c) on such other flights as may be directed by CASA.

## **8 Accessories for water operations**

8.1 Amphibious aircraft when operating over water and all seaplanes and flying boats shall carry at least 1 sea anchor (drogue) and appropriate fittings shall be provided for the attachment of the sea anchor to the aircraft.

- (b) the dates on which a member has undertaken the proficiency test;
- (c) the results of all proficiency tests undertaken by any crew member.

12.6 A proficiency test undertaken within a period of ninety days immediately preceding the expiry date of a certificate issued under paragraph 12.4 shall be deemed to have been undertaken on the expiry date of that certificate.

### **13 Cabin attendants**

#### **13.1 Number of attendants**

Aircraft engaged in the carriage of passengers on regular public transport operations shall contain at least the number of cabin attendants specified in section 20.16.3.

#### **13.2 Seating position**

At all times when they are required to wear seat belts cabin attendants shall be distributed uniformly throughout the passenger compartment or compartments, seated as near as practicable to emergency exits and each section of the aisle(s) shall be under the surveillance of at least 1 cabin attendant.

#### **13.3 Training**

Cabin attendants shall not be assigned to emergency duties on an aircraft unless in addition to the requirements of subsection 12 they have been given instruction in the following on that aircraft:

- (a) a general description of the aircraft;
- (b) a knowledge of all crew member's assignment, functions and responsibilities during an evacuation or ditching;
- (c) briefing of passengers;
- (d) use of public address system, where fitted, and means of communicating with the cockpit; and
- (e) location and use of first aid equipment.

### **14 Briefing of passengers**

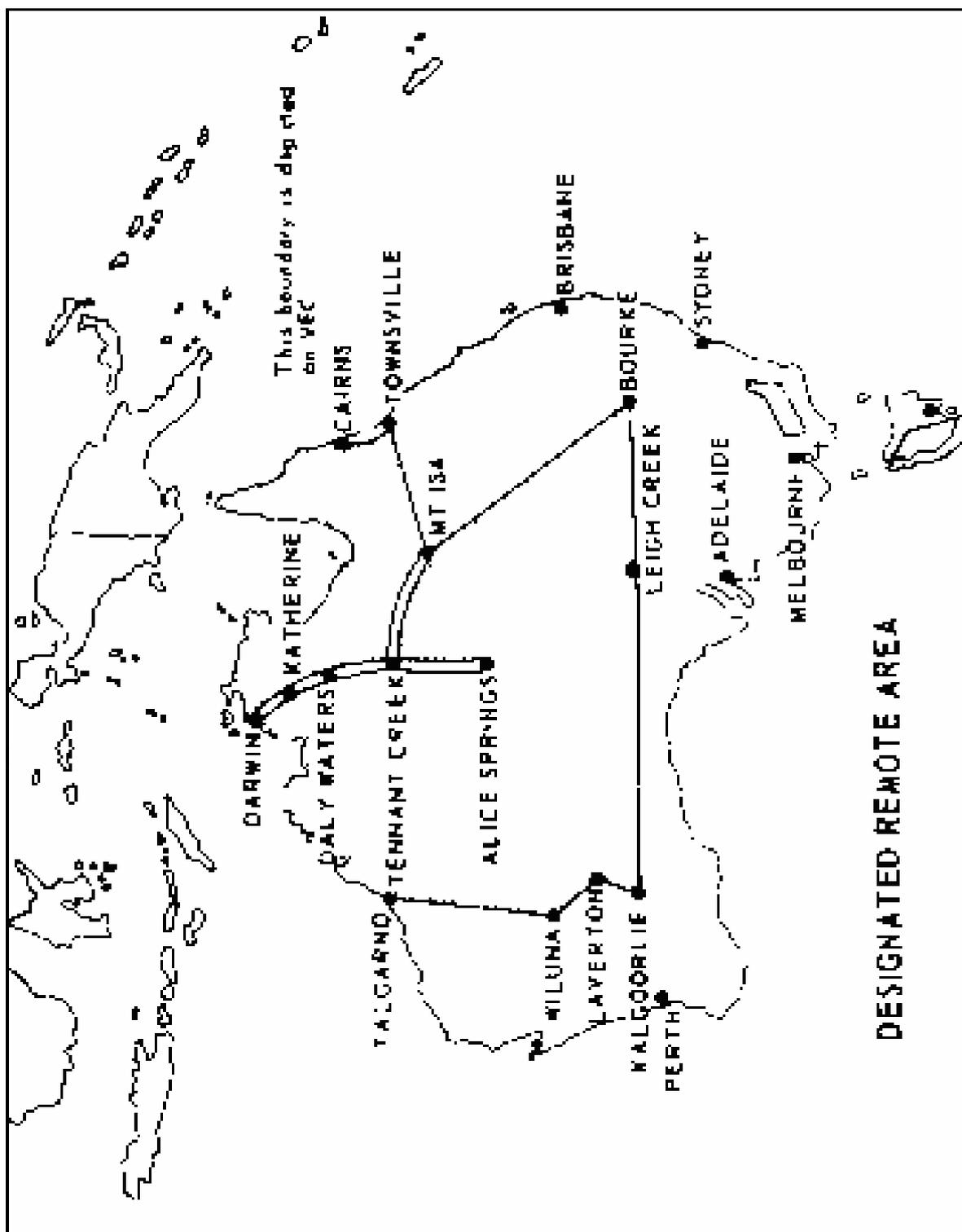
#### **14.1 General**

14.1.1 The operator of an aircraft shall ensure that all passengers are orally briefed before each take-off on:

- (a) smoking, including the prohibition of smoking in toilets; and
- (b) the use and adjustment of seat belts; and
- (c) the location of emergency exits; and
- (d) the use of oxygen where applicable; and
- (e) the use of flotation devices where applicable; and
- (f) stowage of hand luggage; and
- (g) the presence on board of special survival equipment where applicable.

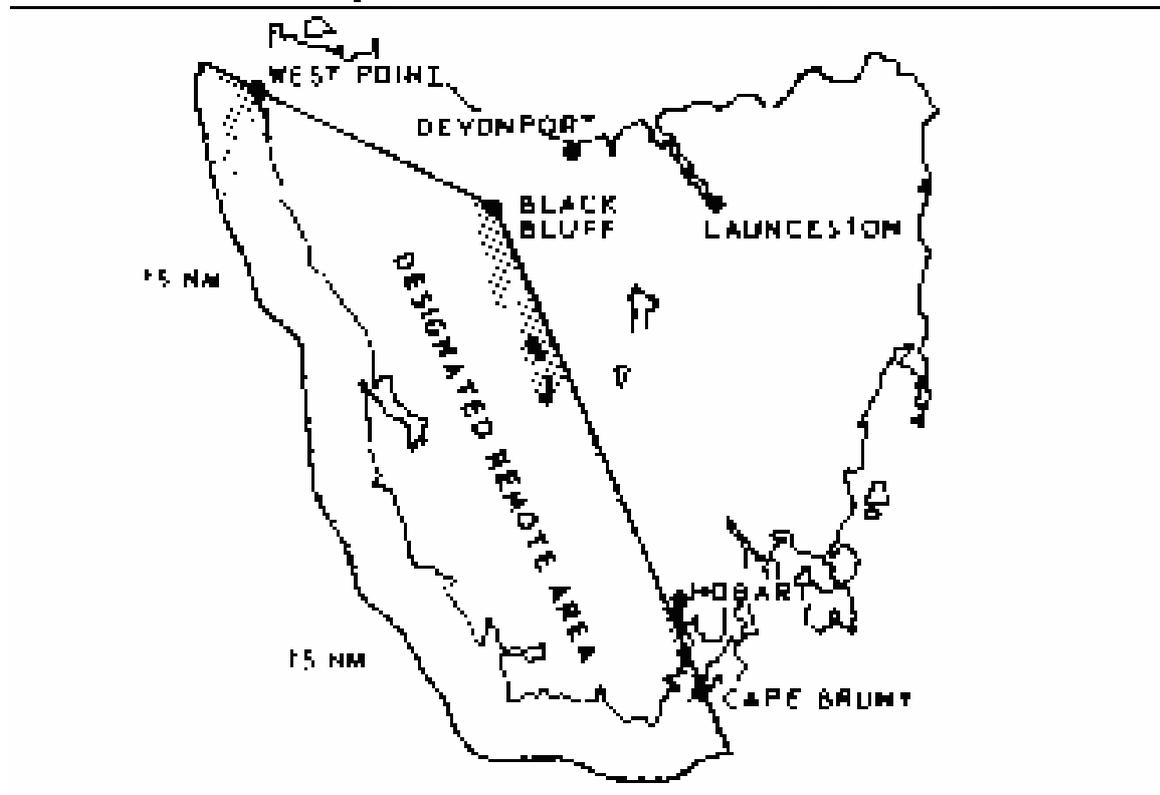
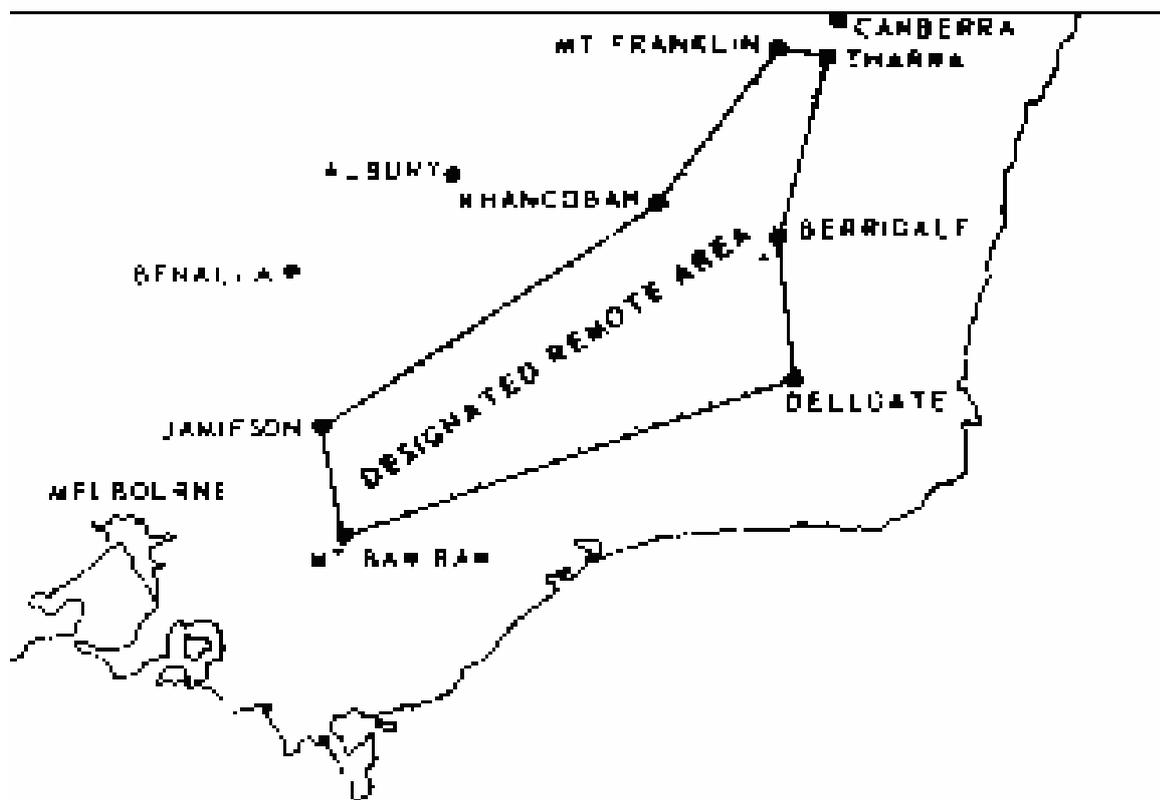
14.1.2 The operator of an aircraft shall ensure that a handicapped person, and the person assisting the handicapped person, if any, is given individual briefing appropriate to the needs of that person in the procedures to be followed in the event of emergency evacuation of the aircraft. The briefing should include which emergency exit to use and when to move to the exit. The person giving the briefing should also enquire as to the most appropriate manner of assisting the handicapped person so as to prevent pain or injury to that person.

Appendix III



Note 3 Mainland within 50 n.m. of Darwin excluded from Designated Remote Area.

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(h) the maximum allowable weight for the flight having regard to the requirements of section 20.7.0.

5.4 The operator and pilot shall ensure that the load sheet is carried in the aircraft and, in the case of aircraft engaged in regular public transport services, that a copy is retained on the ground at the aerodrome of departure.

5.4.1 The operator shall retain a copy of each load sheet for a period of 3 months after the relevant flight.

## 6 Dangerous cargo

Where dangerous cargo is carried, the pilot in command shall be informed of the precise nature and stowage location of such cargo and of the recommended precautions and instructions to be observed in handling in the event of leakage and/or fire.

## 7 Passenger lists

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 for retention 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.

## Note to Civil Aviation Order 20.16.1

### Note 1

The Civil Aviation Order (in force under the *Civil Aviation Regulations 1988*) as shown in this compilation comprises Civil Aviation Order 20.16.1 amended as indicated in the Tables below.

#### Table of Orders

Year and number	Date of notification in <i>Gazette</i> / registration on FRLI	Date of commencement	Application, saving or transitional provisions
CAO 2004 No. R15	8 December 2004	8 December 2004 (see s. 2)	
CAO 20.16.1 2007 No. 1	FRLI 20 December 2007 (see F2007L04938)	21 December 2007 (see s. 2)	

#### Table of Amendments

ad. = added or inserted   am. = amended   rep. = repealed   rs. = repealed and substituted

Provision affected	How affected
s. 20.16.1	rs. CAO 2004 No. R15
subs. 1	rs. CAO 20.16.1 2007 No. 1
subs. 3, Note 1	am. CAO 20.16.1 2007 No. 1

## **Schedule 1      Substitution of section 20.16.2 of the Civil Aviation Orders**

### **SECTION 20.16.2**

#### **AIR SERVICE OPERATIONS — LOADING — GENERAL**

##### **1      APPLICATION**

This section applies to all Australian aircraft.

##### **2      DEFINITIONS**

*Cargo* means things other than persons carried in an aircraft.

##### **3      RESTRAINT**

- 3.1 Cargo stowed on or above the floor line of compartments occupied by persons and behind any person shall be restrained so as to prevent any article from moving under the maximum accelerations to be expected in flight and in an emergency alighting such as a ditching.
- 3.2 Cargo stowed in areas other than those covered by paragraph 3.1 shall be restrained so as to prevent any article from moving under the maximum accelerations to be expected in flight, in a heavy landing, and in a ground loop.
- 3.3 The strength of the restraint provisions for compliance with paragraphs 3.1 and 3.2 shall be not less than that approved or accepted by CASA for a particular type of aircraft.
- 3.4 Cargo restraint equipment shall be flame resistant.

##### **4      STOWAGE**

- 4.1 Cargo shall not be carried in any place where it may damage, obstruct or cause failure of controls, electrical wiring, pipe lines and items of aircraft equipment, essential to the safe operation of the aircraft, unless such items are adequately protected during loading and handling of cargo and during the operation of the aircraft.
- 4.2 Cargo may obstruct an emergency exit where sufficient other emergency exits are available for the number of occupants carried in accordance with the tables in Part 105 and any cargo aft of these exits is restrained in accordance with paragraph 3.1.
  - 4.2.1 Whenever an emergency exit is obstructed, the emergency exit sign for that exit shall be covered or otherwise made ineffective.

- 4.2.1 Whenever an emergency exit is obstructed, the emergency exit sign for that exit shall be covered or otherwise made ineffective.
- 4.3 Cargo shall not obstruct an aisle in accordance with subsection 7 of section 20.16.3.
- 4.4 Where cargo is carried in an aircraft (other than a single pilot aircraft) in which an aisle is not required by subsection 7 of section 20.16.3, the cargo shall be stowed:
- (a) so as to ensure that crew members are able to move freely through the aircraft in a substantially upright position; or
  - (b) so as to provide access through the aircraft for the crew members in such other manner as may be approved by CASA.

## **5 CARGO ON A PASSENGER SEAT**

- 5.1 Cargo may be carried on an unoccupied passenger seat. The weight of such cargo shall be evenly distributed over the squab, and shall not exceed 77 kg, except where a seat loading scheme permitting a greater weight is specifically approved by CASA.
- 5.2 Cargo carried on a passenger seat shall be restrained in accordance with the requirements of paragraph 3.

## **6 CARGO IN PILOT COMPARTMENT**

- 6.1 Carriage of cargo in pilot compartments is prohibited except that in aircraft having a maximum take-off weight not more than 5 700 kg, cargo may be carried on an unoccupied control seat.
- 6.2 Cargo carried on a control seat shall not exceed 77 kg in weight unless a seat loading scheme which would permit a greater weight is specifically approved by CASA.
- 6.3 Cargo shall not be carried on a control seat if the cargo or means of restraint would interfere with the operation of the aircraft.
- 6.3.1 When cargo is carried on a control seat, the flight controls relevant to that seat shall be removed where they have been designed for easy removal and the remaining fittings protected so as to prevent interference by the cargo to the operation of the aircraft.
- 6.4 Cargo carried on a control seat shall be restrained in accordance with the requirements of subsection 3.

## **7 PLACARDING**

Cargo shall only be carried in a place or compartment placarded with loading instructions.

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A ***cabin attendant*** is a crew member, other than a flight crew member, who is qualified in the execution of emergency procedures in accordance with the requirements of section 20.11.

A ***child*** is a passenger who has reached his or her third but not his or her thirteenth birthday.

An ***infant*** is a passenger who has not reached his or her third birthday.

A ***passenger*** is a person who is not a crew member.

### **3 Seats**

- 3.1 Each crew member and each passenger shall occupy a seat of an approved type:
- (a) during take-off and landing; and
  - (b) during an instrument approach; and
  - (c) when the aircraft is flying at a height less than 1000 feet above the terrain; and
  - (d) in turbulent conditions:  
except:
    - (i) infants, children and stretcher cases carried in accordance with subsections 13 and 14 respectively; and
    - (ii) package dispatchers carried in accordance with section 29.5; and
    - (iii) parachutists carried in accordance with subsection 15.
- 3.2 Each crew member and passenger shall occupy a seat of an approved type during agricultural operations and during acrobatic manoeuvres.
- 3.3 The operator of the aircraft must ensure that exit rows in the aircraft are occupied only by persons who are fully able and willing to assist with access to the emergency exits in the event of an emergency.

### **4 Seat belts and safety harnesses**

- 4.1 Except as provided in subsections 14 and 15 safety harnesses, or seat belts where safety harnesses are not fitted, shall be worn by all persons at the times listed in paragraph 3.1. Seat belts and safety harnesses shall be adjusted to fit the wearer without slack.
- 4.2 At least 1 pilot crew member shall wear a seat belt or harness at all times during flight.
- 4.3 When a cabin attendant is not required to be carried in an aircraft, and the passenger seating capacity is 10 seats or more, an approved and serviceable electronic public address system shall be provided to enable the pilot in command to notify passengers when a seat belt or safety harness is to be worn.

### **5 Adjustment of seats**

- 5.1 All seats (with the exception of those specified in paragraph 5.2) shall be adjusted to their upright position for take-off and landing.
- 5.2 When it is desirable through illness or other incapacity that a passenger's seat remains in the reclined position during take-off or landing, that seat, notwithstanding the provision of paragraph 5.1, may be left reclined during

*Civil Aviation Order 20.16.3 .5.2* continued.

take-off or landing if it is forward facing, there is no person occupying the seat immediately behind, and it will not impede the egress of any person in an emergency evacuation.

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(b) satisfies the requirements of subparagraph 6.1 (a) need not be provided with an aisle, provided that the relevant requirements of section 20.11 can be complied with.

## **8 Smoking**

Pursuant to paragraph 255 (2) (a) of the *Civil Aviation Regulations 1988*, a notice(s) specifying the periods during which smoking is prohibited may be permanently displayed in the crew compartment and toilets of all aircraft and in the passenger compartment of aircraft which have only 1 passenger compartment and a maximum take-off weight of 5 700 kg or less.

## **9 Stowage of loose articles**

- 9.1 Loose articles in the cabin of an aircraft, including items of equipment and crew members and passengers' personal effects, shall be stowed so as to avoid the possibility of injury to persons or damage to the aircraft through the movement of such articles caused by in-flight turbulence or by unusual accelerations or manoeuvres.
- 9.2 Except as provided for in paragraph 4.2 of section 20.16.2 all aisles, passageways and exits shall be kept clear of obstructions when the aircraft has passengers on board and is in flight below 1 000 feet above terrain or, except when embarking or disembarking passengers, is on the ground.
- 9.3 All solid articles shall be placed in approved stowage at all times when seat belts are required to be worn in accordance with paragraph 4.1.
- 9.4 Approved stowage for solid articles means:
  - (a) under a passenger seat, where the stowage compartment has an approved means of preventing solid articles from shifting forwards; or
  - (b) in an overhead locker in accordance with the design weight limitation of the locker; or
  - (c) in any other locker or rack, excluding overhead racks, which have been designed to contain solid articles in flight.

*Note* Underseat stowage compartments which comply with the forward restraint provisions of section 103.10 are approved for the purposes of this section.

## **10 Passenger service**

Except when in use, all items provided for passenger service, such as food containers, vacuum flasks and serving trays, shall be carried in their respective stowages and secured against movement likely to cause injury to persons or damage to the aircraft. In any case, all such items shall be stowed during take-off and landing.

## **11 Carriage of passengers in seats at which dual controls are fitted**

- 11.1 Except as provided in paragraph 11.2, in all aircraft for which the Certificate of Airworthiness specifies a minimum crew of 1 pilot, a person may occupy a seat at which fully or partially functioning dual controls are fitted if the pilot gives adequate instruction to that person to ensure that the controls are not interfered with in flight and there is satisfactory communication available at all times between the pilot and that person.

*Civil Aviation Order 20.16.3*

- 11.2 In respect of aircraft engaged in regular public transport operations, the seat referred to in paragraph 11.1 shall not be occupied by a person other than a licensed pilot or an employee of the operator of the aircraft unless approved by CASA. Details of such an approval shall be included in the Operations Manual.
- 11.3 The provisions of these paragraphs shall not be construed as limiting the exercise of the authority of CASA in accordance with regulation 226 of the *Civil Aviation Regulations 1988*.

**12 Passenger capacity**

- 12.1 The number of passengers carried in an aircraft for which an emergency evacuation demonstration is required by subsection 15 of section 20.11 shall not exceed the number demonstrated or the number otherwise approved by CASA, except that when infants are carried the number may be increased by 5% (to the nearest whole number), provided the excess passengers are infants.
- 12.2 The number of passengers carried in an aircraft for which an emergency evacuation demonstration is not required may exceed the number of approved passenger seats fitted in the aircraft only if the excess number of passengers:
- (a) has been approved by CASA; or
  - (b) does not exceed the number specified in column 2 of the following table opposite the number of passenger seats specified in column 1;
- and the excess passengers are infants or children:

**Table**

<b>Column 1</b> <b>No. of passenger seats</b>	<b>Column 2</b> <b>No. of excess passengers</b>
2-6	1
7-13	2
14-20	3
21-26	4
27-39	5
40-44	6

**13 Carriage of infants and children**

- 13.1 Where their combined weight does not exceed 77 kg, 2 children may occupy 1 seat if:
- (a) seated side by side; and
  - (b) restrained by a lapstrap only; and
  - (c) the seat-belt is adjusted to secure both children at all times when a seat belt is required to be worn.
- 13.2 (1) An infant may be carried in the arms or on the lap of an adult passenger, in a bassinet or in an infant seat in accordance with paragraphs 13.3, 13.4, 13.5 and 13.6 providing the bassinet or infant seat is restrained so as to prevent it from moving under the maximum accelerations to be expected

**14 Persons or passengers who require assistance due to sickness, injury or disability**

- 14.1 The operator of an aircraft must, as much as possible, identify any person on the aircraft who requires assistance due to sickness, injury or disability.
- 14.2 The operator and pilot in command of an aircraft must ensure that any person who requires assistance due to sickness, injury or disability is not seated where he or she could obstruct or hinder access to any emergency exits.
- 14.3 If a person who requires assistance due to sickness, injury or disability is carried on an aircraft, the operator and pilot in command must:
- (a) take all reasonable precautions to prevent hazards to other persons on the aircraft; and
  - (b) ensure that there are procedures in place to enable particular attention to be given to any such passenger in an emergency; and
-

- (c) ensure that individual briefings on emergency procedures are given to any such person in accordance with Civil Aviation Order 20.11.

**14.4** The carriage of stretcher patients on any aircraft must be in accordance with the following requirements:

- (a) the stretcher must be secured in the aircraft so as to prevent it from moving under the maximum acceleration likely to be experienced in flight and in an emergency alighting such as ditching;
- (b) the patient must be secured by an approved harness to the stretcher or aircraft structure.

*Note* Psychiatric restraint equipment is not an approved harness for this purpose.

## **15 Carriage of parachutists**

- 15.1 Where a parachutist is not provided with a seat of an approved type, he or she shall be provided with a position where he or she can be safely seated.
- 15.2 During the times specified in paragraph 3.1, he or she shall, except when he or she is about to jump:
  - (a) occupy a seat or a seating position;
  - (b) wear, adjusted to ensure adequate restraint;
    - (i) a seat belt; or
    - (ii) a safety harness; or
    - (iii) a parachute connected to an approved single point restraint.

**TAWS-B+ system** means a terrain awareness and warning system that is equipped with a visual display and complies with the requirements for Class B equipment expressed in (E)TSO-C151, (E)TSO-C151a or (E)TSO-C151b.

- 2.2 In this Order, a reference to an (E)TSO, a TSO or an ETSO, as defined in subsections 9B and 9D, with an empty bracket at the end of the reference, includes the (E)TSO, TSO or ETSO in a version that contains a number within the bracket.

### **3 Instrumentation for flight under the Visual Flight Rules (the V.F.R.)**

#### RPT aeroplanes and large charter aeroplanes

- 3.1 An aeroplane engaged in:
- (a) a regular public transport (**RPT**) operation; or
  - (b) a charter operation that has maximum take-off weight exceeding 5 700 kg — a charter operation;
- may only be operated under the V.F.R. if it is equipped with the following:
- (c) the instruments specified in Appendix II;
  - (d) any other instruments and indicators specified in the aeroplane's flight manual.

*Note* **V.F.R.** and **flight manual** are defined in subregulation 2 (1) of CAR 1988.

#### Helicopters

- 3.2 Subject to paragraph 3A.1, a helicopter may only be operated under the V.F.R. if it is equipped with the following:
- (a) the instruments specified in Appendix VI;
  - (b) any other instruments and indicators specified in the helicopter's flight manual.

#### Hot air balloons and hot air airships

- 3.3 Subject to paragraph 3A.2, a hot air balloon and a hot air airship may only be operated under the V.F.R. if the balloon or airship is equipped with the following:
- (a) the instruments specified in Appendix X;
  - (b) any other instruments and indicators specified in the flight manual of the balloon or airship.

#### Other aircraft in private, aerial work or charter operations

- 3.4 Subject to paragraph 3A.3, an aircraft:
- (a) engaged in a private, aerial work or charter operation; and
  - (b) not mentioned in paragraphs 3.1 to 3.3;
- may only be operated under the V.F.R. if it is equipped with the following:
- (c) the instruments specified in Appendix I;
  - (d) any other instruments and indicators specified in the aircraft's flight manual.

### **3A Operations to which flight and navigation equipment requirements do not apply**

- 3A.1 Paragraph 3.2 does not apply to a helicopter that operates under the V.F.R., and for which an experimental certificate has been issued under paragraph 21.191 (g) or (h) of CASR 1998, if equipment is carried that provides a pilot with the same information that would be obtained by compliance with the requirements of Appendix VI for operations by day, or Appendix VIII if approved for operations by night.

3A.2 Paragraph 3.3 does not apply to a balloon that operates by day under the V.F.R.:

- (a) being an aircraft for which a current certificate of airworthiness as a light sport aircraft (*LSA*) has been issued; or
- (b) being an aircraft for which an experimental certificate has been issued under paragraph 21.191 (g), (h) or (j), or an LSA for which an experimental certificate has been issued under paragraph 21.191 (k), of CASR 1998;

if equipment is carried that provides a pilot with the same information that would be obtained by compliance with the requirements of Appendix X.

3A.3 Paragraph 3.4 does not apply to any other aircraft that operates under the V.F.R.:

- (a) being an aircraft for which a current certificate of airworthiness as an LSA has been issued; or
- (b) being an aircraft for which an experimental certificate has been issued under paragraph 21.191 (g), (h) or (j) or an LSA for which an experimental certificate has been issued under paragraph 21.191 (k), of CASR 1998;

if equipment is carried that provides a pilot with the same information that would be obtained by compliance with the requirements of Appendix I for operations by day, or Appendix IV if approved for operations by night.

3A.4 An aircraft referred to in paragraphs 3A.1 to 3A.3 that is approved to operate at night and is equipped with an Electronic Flight Information System (*EFIS*), or other means of electronically displaying the required information, must be provided with a battery-powered back-up, or another form of instrumentation independent of the aircraft electrical system, that is approved by an authorised person as suitable, in the case of a failure of the aircraft electrical system, for the purpose of enabling the pilot to divert to and use a safe landing site.

3A.5 If an aircraft equipped as required under paragraph 3A.4 has a battery-powered back-up to an EFIS, the back-up must be of sufficient capacity to power the EFIS panel or other display for 90 minutes and must be fully charged before the commencement of a flight at night.

3A.6 Subject to paragraph 3A.7, an Australian registered aircraft may be operated without compliance with the flight and navigation equipment requirements in subsections 3 and 4 of this Order if it can show compliance with an equivalent level of safety, as determined by the type certifying authority for the aircraft, taking into consideration its intended operation.

3A.7 The type certifying authority for the aircraft must be a recognised authority.

3A.8 In paragraph 3A.7:

***recognised authority*** means an authority of a country listed in regulation 21.012 of CASR 1998.

**10 Serviceability**

10.1 In the case of a charter or RPT aircraft, all instruments and equipment that it carries, or is fitted with, under subregulation 207 (2) of CAR 1988 must be serviceable before take-off, unless:

- (a) flight with unserviceable instruments or equipment has been approved by CASA, subject to such conditions as CASA specifies; or
- (b) the unserviceability is a permissible unserviceability set out in the minimum equipment list for the aircraft and any applicable conditions under subregulation 37 (2) of CAR 1988 have been complied with; or
- (c) CASA has approved the flight with the unserviceable instrument or equipment and any applicable conditions that CASA has specified, in writing, have been complied with; or
- (d) the unserviceable instrument or equipment is a passenger convenience item only and does not affect the airworthiness of the aircraft.

*Note* Equipment referred to in paragraph 10.1 includes oxygen and protective breathing equipment, emergency lifesaving equipment, seats, seat belts and safety equipment that are required to meet an applicable standard, and other instruments and equipment required to be carried or fitted under this Order.

- 10.1A A private or aerial work aircraft must not be operated:
- (a) under the V.F.R., unless:
    - (i) all instruments and equipment required to be fitted to the aircraft under subsection 3 are serviceable before take-off; or
    - (ii) CASA has approved the flight with the unserviceable instrument or equipment and any applicable conditions that CASA has specified, in writing, have been complied with; or
  - (b) under the I.F.R., unless:
    - (i) all instruments and equipment required to be fitted to the aircraft under subsection 4 are serviceable before take-off; or
    - (ii) CASA has approved the flight with the unserviceable instrument or equipment and any applicable conditions that CASA has specified, in writing, have been complied with.
- 10.2 Where flight is conducted with unserviceable instruments or equipment under the provisions of paragraph 10.1 or 10.1A, the unserviceable instruments or equipment must be prominently placarded “UNSERVICEABLE” or removed from the aircraft.
- Note* Where an instrument or piece of equipment performs more than 1 function, it is permissible to placard as unserviceable only the function(s) which are unserviceable.
- 10.3 The holder of an AOC authorising an RPT operation must:
- (a) have a minimum equipment list or lists for the aircraft used to conduct those operations; and
  - (b) include each list in the operations manual for the aircraft to which that list applies.
- 10.4 The holder of an AOC authorising charter operations:
- (a) may have a minimum equipment list or lists for the aircraft used to conduct those operations; and
  - (b) must include each list in the operations manual for the aircraft to which that list applies.

## **Appendix I**

### **Instruments required for flight under the V.F.R.**

(Limited to aircraft specified in subsection 3, paragraph 3.1)

- 1 The flight and navigational instruments required for flights under the V.F.R. are:
  - (a) an airspeed indicating system; and
  - (b) an altimeter, with a readily adjustable pressure datum setting scale graduated in millibars; and
  - (c) (i) a direct reading magnetic compass; or  
(ii) a remote indicating compass and a standby direct reading magnetic compass; and
  - (d) an accurate timepiece indicating the time in hours, minutes and seconds. This may be carried on the person of the pilot or navigator.
- 2 In addition to the instruments required under clause 1, aircraft, other than helicopters, engaged in charter, or aerial work, operations and operating under the V.F.R., must be equipped with:
  - (a) a turn and slip indicator (agricultural aeroplanes may be equipped with a slip indicator only); and
  - (b) an outside air temperature indicator when operating from an aerodrome at which ambient air temperature is not available from ground-based instruments.

## Appendix II

### Instruments required for:

- (i) aeroplanes engaged in RPT operations; and**
- (ii) aeroplanes engaged in charter operations which have a maximum take-off weight greater than 5 700 kg**

- 1 The flight and navigation instruments required are:
  - (a) an airspeed indicating system with means of preventing malfunctioning due to either condensation or icing; and
  - (b) 2 sensitive pressure altimeters; and
  - (c)
    - (i) a direct reading magnetic compass; or
    - (ii) a remote indicating compass and a standby direct reading magnetic compass; and
  - (d) an accurate timepiece indicating the time in hours, minutes and seconds; and
  - (e) a rate of climb and descent indicator (vertical speed indicator); and
  - (f) an outside air temperature indicator; and
  - (g) 2 attitude indicators (artificial horizons); and
  - (h) a heading indicator (directional gyroscope or equivalent approved by CASA); and
  - (i) a turn and slip indicator except that only a slip indicator is required when a third attitude indicator usable through flight attitudes of 360 degrees of pitch and roll is installed in accordance with paragraph (k) of this Appendix; and
  - (j) a means of indicating whether the power supply to those instruments requiring power is working satisfactorily; and
  - (k) in turbo-jet aeroplanes having a maximum take-off weight greater than 5 700 kg and in turbo-prop aeroplanes having a maximum take-off weight greater than 18 000 kg a third attitude indicator which:
    - (i) is powered from a source independent of the electrical generating system; and
    - (ii) continues to provide reliable indications for a minimum of 30 minutes after total failure of the electrical generating system; and
    - (iii) is operative without selection after total failure of the electrical generating system; and
    - (iv) is located on the instrument panel in a position which will make it plainly visible to, and usable by, any pilot at his station; and
    - (v) is appropriately lighted during all phases of operation; and
  - (l) in turbo-jet aeroplanes with operating limitations expressed in terms of Mach number, a Mach number indicator (Machmeter).
- 2 (a) For aeroplanes above 5 700 kg maximum take-off weight, the instruments used by the pilot in command and which are specified in paragraphs 1 (a), (b), (e) and (l) of this Appendix must be capable of being connected either to a normal or an alternate static source but not both sources simultaneously. Alternatively, the aeroplane may be fitted with 2 independent static sources each consisting of a balanced pair of flush static ports of which 1 is used for the instruments specified

- above. Instruments and equipment other than flight instruments provided for use by the pilot in command, must not be connected to the normal static system that operates the instruments of the pilot in command;
- (b) for aeroplanes not above 5 700 kg maximum take-off weight, the instruments specified in paragraphs 1 (a), (b), (e) and (l) of this Appendix must be capable of being connected to either a normal or alternate static source but not both sources simultaneously. Alternatively, the aeroplane may be fitted with a balanced pair of flush static ports.
- 3 The instruments specified in paragraphs 1 (g), (h) and (i) of this Appendix must have duplicated sources of power supply.
  - 4 CASA may, having regard to the type of aeroplane, approve an attitude indicator incorporated in an automatic pilot system being 1 of the 2 attitude indicators required by paragraph 1 (g) of this Appendix.
  - 5 A gyro-magnetic type of remote indicating compass installed to meet the requirements of paragraph 1 (c) (ii) of this Appendix may also be considered to meet the requirement for a heading indicator specified in paragraph 1 (h) of this Appendix, provided that it has a duplicated power supply.
  - 6 For V.F.R. flight, the following instruments may be unserviceable:
    - (a) the attitude indicator required by paragraph 1 (k);
    - (b) 1 of the attitude indicators required by paragraph 1 (g) provided that the attitude indicator required by paragraph 1 (k) is serviceable or an attitude indicator has been provided to meet the requirements of paragraph 1 (i) and is serviceable;
    - (c) the turn and slip indicator or slip indicator and attitude indicator required by paragraph 1 (i).

- (c) ensure that individual briefings on emergency procedures are given to any such person in accordance with Civil Aviation Order 20.11.
- 14.4 The carriage of stretcher patients on any aircraft must be in accordance with the following requirements:
- (a) the stretcher must be secured in the aircraft so as to prevent it from moving under the maximum acceleration likely to be experienced in flight and in an emergency alighting such as ditching;
  - (b) the patient must be secured by an approved harness to the stretcher or aircraft structure.

*Note* Psychiatric restraint equipment is not an approved harness for this purpose.

## **15 Carriage of parachutists**

- 15.1 Where a parachutist is not provided with a seat of an approved type, he or she shall be provided with a position where he or she can be safely seated.
- 15.2 During the times specified in paragraph 3.1, he or she shall, except when he or she is about to jump:
- (a) occupy a seat or a seating position;
  - (b) wear, adjusted to ensure adequate restraint;
    - (i) a seat belt; or
    - (ii) a safety harness; or
    - (iii) a parachute connected to an approved single point restraint.

## **Schedule 1      Substitution of section 29.5 of the Civil Aviation Orders**

### **SECTION 29.5**

#### **AIR SERVICE OPERATIONS — MISCELLANEOUS DROPPING OF ARTICLES FROM AIRCRAFT IN FLIGHT**

##### **1      APPLICATION**

This section applies to all Australian aircraft except those aircraft engaged in agricultural operations or agricultural training operations.

##### **2      DIRECTIONS RELATING TO DROPPING OF ARTICLES**

2.1 This subsection deals with directions for the purposes of paragraph 150 (2) (a) of the *Civil Aviation Regulations 1988*.

2.2 In respect of dropping for the purposes of cloud seeding or search and rescue operations, the directions set out in subsections 4 and 5 apply.

2.3 In respect of dropping for the purposes of search and rescue training operations, the directions set out in subsections 3, 4 and 5 apply.

2.3.1 In respect of the release of liquid fuel, the directions set out in subsection 8 apply.

2.4 In respect of dropping for purposes other than those mentioned in paragraphs 2.2, 2.3 and 2.3.1, the directions set out in subsections 3, 4, 5 and 7 apply.

Note 1: The directions specified in this Order do not confer any rights as against the owner of any land over which the operations may be conducted, or prejudice in any way the rights and remedies which any person may have in common law in respect of any injury to persons or damage to property caused directly or indirectly during the operations.

##### **3      DROPPING SITE**

Dropping shall not be carried out within a control zone, within an aircraft lane of entry, or within 5 miles of a Government or licensed aerodrome, without the approval of CASA.

##### **4      DROPPING REQUIREMENTS**

4.1 The articles or substances shall be carried inside the aircraft or in a manner specified in the flight manual or otherwise approved by CASA.

- 4.2 The opening through which the articles or substances are dropped shall be located so that the articles or substances, on release, will not damage or affect the operation of any part of the aircraft.
- 4.3 The size to weight ratio of individual articles shall be such that they will drop readily away from the aircraft.
- 4.4 For articles other than leaflets or substances not in the form of liquid, powder or fine grains, the dropping site shall be of such dimensions that there is no risk of the articles or substances falling outside the site.
- 4.5 Articles, other than leaflets or substances not in the form of liquids, powder or fine grains, shall not be dropped on a site unless it is clear of persons and stock.
- 4.6 The size of the leaflets and the number dropped at any one time shall be limited to an extent which will ensure that injury is not caused to persons on the ground if the leaflets fail to separate while dropping.
- 4.7 The dropping of articles or substances shall be controlled by a person other than the pilot in command (hereinafter referred to as the despatcher), unless the dropping can be carried out by the pilot in command from his normal crew station and without affecting his ability to control the aircraft normally.
- 4.8 Effective communication shall be maintained between the pilot in command and the despatcher during the dropping operation and the articles or substances shall be dropped only with the consent of the pilot in command.
- Note: In this Order, *dropping operation* means that part of the flight during which the aircraft is on the final approach path to the dropping site or target, and during which only minor changes of heading, airspeed and altitude are made.
- 4.9 The pilot in command shall ensure that movement of articles or substances during flight preparatory to dropping, during the dropping and after the dropping will not result in any change in aircraft trim that could cause an unsafe condition or cause the aircraft's centre of gravity to move outside permissible limits.
- 4.10 The operator shall ensure that the despatcher is properly instructed in his duties.
- 4.11 The pilot in command shall possess the qualifications set out in the Appendix.

## **5 CARRIAGE OF ARTICLES AND PERSONS**

- 5.1 The carriage of articles or substances prior to dropping shall be in accordance with section 20.16.2.

- 5.2 Except with the permission of CASA, no person other than the persons having duties relating to the operation shall be carried in an aircraft engaged in operations during which dropping is carried out.
- 5.3 During dropping operations, each person on board except despatchers shall occupy a separate seat equipped with an approved safety belt or harness which shall be worn adjusted to ensure adequate restraint.
- 5.4 Where the dropping aperture is large enough for a person to fit through, all occupants except despatchers shall remain seated whenever the aperture is open.
- 5.5 A despatcher need not be provided with a seat but a position where he may sit shall be provided and equipped with an approved safety belt or harness.
- 5.5.1 A despatcher shall remain seated and wear a safety belt or harness adjusted to ensure adequate restraint:
- (a) during take-off and landing; and
  - (b) during an instrument approach.
- 5.5.2 Except during dropping operations a despatcher shall remain seated and wear a safety belt or harness adjusted to ensure adequate restraint:
- (a) in turbulent conditions; and
  - (b) when the aircraft is flying at a height of less than 100 feet above the terrain.
- 5.6 A despatcher shall wear approved restraint equipment during dropping operations and this equipment may permit him to move to but not through the dropping aperture.

## **6 LOW FLYING PERMIT**

- 6.1 Subject to subsection 7 and pursuant to paragraph 157 (4) (b) of the *Civil Aviation Regulations 1988*, CASA grants a general permit:
- (a) to each owner and operator of an aeroplane that is engaged in private, or aerial work, operations that require low flying (being dropping operations associated with search and rescue training) to fly at a height not lower than 100 feet during such operations; and
  - (b) to each owner and operator of an aircraft (other than an aeroplane) that is engaged in private, or aerial work, operations, being:
    - (i) dropping operations associated with search and rescue training; or
    - (ii) other dropping operations or practice for such operations; to fly at a height lower than 500 feet during such operations over any area that is not a populous area.

**7 Operating conditions**

- 7.1 An aircraft must not fly over any populous area at a height lower than 1 000 feet above the terrain, unless a flight at a lower height is essential to the efficient conduct of a dropping operation and such an operation is occasioned by an emergency.
- 7.2 Except with the permission of CASA, dropping operations shall be conducted by day only, in accordance with visual flight rules, and in continuous sight of the ground or water.

**8 Directions relating to the release of liquid fuel**

- 8.1 If paragraph 150 (2) (d) of the *Civil Aviation Regulations 1988* does not apply, a pilot in command may only release fuel in accordance with the *Air Navigation (Fuel Spillage) Regulations 1999*.

## 1 Prescription of endorsements

- 1.1 For the purposes of subregulation 5.22 (1), the type endorsements set out in column 1 of Appendix I are prescribed for aeroplanes.
- 1.2 For the purposes of subregulation 5.22 (1), the class endorsements set out in Appendix IA are prescribed for aeroplanes.
- 1.3 For the purposes of subregulation 5.22 (1), the following special design feature endorsements are prescribed:
  - (a) manual propeller pitch control;
  - (b) tail wheel undercarriage;
  - (c) retractable undercarriage;
  - (d) ski landing gear;
  - (e) float alighting gear;
  - (f) floating hull;
  - (g) pressurisation system.

## 2 Classification of aeroplanes

- 2.1 For the purposes of subregulation 5.22 (2), the types of aeroplane specified in column 3 of an item in Appendix IB are included in the class specified in column 2 of that item.

### 2A Endorsement following conversion training

- 2A.1 In this subsection:

***available***, for the availability of a qualified synthetic training device (***QSTD***) to a person means that the ***QSTD***:

- (a) exists in Australia or a recognised foreign State, as the case requires; and
- (b) is offered for use on a commercial basis; and
- (c) is serviceable and available to be used by the person, or reserved by the person or an operator on behalf of the person.

***maximum certificated passenger seating capacity*** means the maximum number of seats for persons (excluding flight crew and cabin crew) in an aircraft as specified in the aircraft's type certificate data sheet.

***passenger seating capacity*** means maximum certificated passenger seating capacity.

***qualified***, for a synthetic training device, means:

- (a) if the synthetic training device is available in Australia — qualified under Part 60 of the *Civil Aviation Safety Regulations 1998 (CASR 1998)*, as applicable, for conversion training for an aeroplane type; or
- (b) if the synthetic training device is only available in a recognised foreign State — approved by the national airworthiness authority (NAA) of the State for use equivalent to the use the device could be put to if it were qualified under Part 60 of CASR 1998, as applicable, for conversion training for an aeroplane type.



**Australian Government**

**Civil Aviation Safety Authority**

***Civil Aviation Order 48.1 Instrument 2019  
(as amended)***

made under subregulation 5 (1), regulation 210A and subregulation 215 (3) of the *Civil Aviation Regulations 1988*, subregulation 11.068 (1) of the *Civil Aviation Safety Regulations 1998*, and paragraph 28BA (1) (b) and subsection 98 (4A) of the *Civil Aviation Act 1988*.

This compilation was prepared on 18 November 2019 taking into account amendments up to *Civil Aviation Order 48.1 Amendment Instrument 2019 (No. 1)*. It is a compilation of *Civil Aviation Order 48.1 Instrument 2019* as amended and in force on 18 November 2019.

Prepared by the Advisory and Drafting Branch, Legal and Regulatory Affairs Division, Civil Aviation Safety Authority, Canberra.

Compilation No. 1

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*Note* This Table of Contents is not part of *Civil Aviation Order 48.1 Instrument 2019*. It is for reader guidance only. The Table may be modified or edited in any published version of the Instrument. See paragraph 1.2 in Part 1.

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## Civil Aviation Order 48.1 Instrument 2019

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### PART 1 GENERAL

#### 1 Name of instrument

- 1.1 This instrument is the *Civil Aviation Order 48.1 Instrument 2019*.
- 1.2 The Table of Contents at the front of this instrument is not part of this instrument. It is for guidance only and may be modified or edited in any published version of this instrument.

#### 2 Commencement

This instrument commences on 2 September 2019.

*Note* Subsection 5 of this instrument provides savings and transitional provisions for certain AOC holders and Part 141 operators which determine when some provisions take effect.

#### 3 Repeals

- 3.1 Each of the following Civil Aviation Orders (*CAOs*), as in force immediately before 2 September 2019, is repealed:
  - (a) CAO 48.0, Flight time limitations — general;
  - (b) CAO 48.1, Flight time limitations — pilots;
  - (c) CAO 48.2, Flight time limitations — flight engineers;
  - (d) CAO 48.3, Flight time limitations — flight navigators;
  - (e) CAO 48.4, Flight time limitations — flight radio operators.
- 3.2 To avoid doubt, each of the following Civil Aviation Amendment Orders (*CAAOs*), as in force immediately before 2 September 2019, is repealed:
  - (a) CAAO (No. R47) 2004;
  - (b) CAAO (No. R48) 2004;
  - (c) CAAO (No. R49) 2004;
  - (d) CAAO (No. R50) 2004;
  - (e) CAAO (No. R51) 2004.
- 3.3 To avoid doubt, each of the following sections of the *CAOs*, as in force immediately before 2 September 2019, is repealed:
  - (a) Section 48.0;
  - (b) Section 48.1;
  - (c) Section 48.2;
  - (d) Section 48.3;
  - (e) Section 48.4.
- 3.4 To avoid doubt, Part 48 – Flight time limitations, of the *CAOs*, as in force immediately before 2 September 2019, is repealed.
- 3.5 To avoid doubt, each *CAO* mentioned in paragraph 3.1, each *CAAO* mentioned in paragraph 3.2, each section of the *CAOs* mentioned in paragraph 3.3, and Part 48 of the *CAOs* mentioned in paragraph 3.4, as continued in force by subregulation 335 (2) of *CAR* as if it had been made on 1 September 2014 under regulation 210A of *CAR*, is repealed.
- 3.6 Subject to paragraph 3.9, *Civil Aviation Order 48.1 Instrument 2013*, as in force immediately before 2 September 2019, is repealed.

- 3.7 Subject to paragraph 3.9, *Civil Aviation Order 48.1 Amendment Instrument 2016 (No. 1)*, as in force immediately before 2 September 2019, is repealed.
- 3.8 To avoid doubt, each exemption made under an instrument mentioned in any of the paragraphs 3.1 to 3.7, inclusive, is repealed.
- 3.9 Despite paragraphs 3.6 and 3.7, an approval issued under Appendix 7 of *Civil Aviation Order 48.1 Instrument 2013 (CAO 48.1 Instrument 2013)*, including CAO 48.1 Instrument 2013 as amended before 2 September 2019, continues to have effect until the expiry date specified in the approval, as if Appendix 7 of CAO 48.1 Instrument 2013 (including as amended before 2 September 2019) had not been repealed.

#### **4 Application and effect**

- 4.1 Subject to paragraph 4.2, this CAO applies, according to its terms, to each of the following:

- (a) subject to subparagraph (b), an AOC, other than a foreign air transport AOC;  
*Note* The expression “foreign air transport AOC” and the related expression “foreign air transport operation” are defined in the CASR Dictionary. See Part 129 of CASR.
- (b) except when subsection 11 applies — an AOC which covers application operations under Part 137 of CASR;
- (c) a Part 141 certificate;
- (d) a flight crew member employed by the holder of an AOC or a Part 141 certificate to which subparagraph (a), (b) or (c) applies;
- (e) for the purposes of subsection 16 — a flight crew member mentioned in that subsection.

- 4.2 Without affecting paragraph 4.4, this CAO does not apply to any of the following:

- (a) a Part 141 operator for authorised Part 141 flight training;
  - (b) a Part 142 operator for authorised Part 142 activity;
  - (c) an FCM of an operator mentioned subparagraph (a) or (b);
- if the flight training or the activity is conducted in a flight simulation training device as the sole and exclusive form of training or activity conducted by the operator under the authorisation.

*Note* The CAO will apply to a person mentioned in subparagraph (a) or (b), and hence apply to a person mentioned in subparagraph (c), if any training or activity involves operations in an aircraft.

- 4.3 Subject to paragraph 4.4, this CAO sets out:

- (a) for paragraph 28BA (1) (b) of the Act — conditions on each AOC mentioned in subparagraphs 4.1 (a) and (b); and
- (b) for subregulation 11.068 (1) of CASR — conditions on each Part 141 certificate mentioned in subparagraph 4.1 (c); and

*Note* Conditions on an AOC are imposed under paragraph 28BA (1) (b) of the Act. Conditions on a Part 141 certificate are imposed under subregulation 11.068 (1) of CASR.

- (c) for subregulation 11.068 (1) of CASR — conditions on the flight crew licence of each flight crew member mentioned in subparagraphs 4.1 (d) and (e).

- 4.4 The condition set out in paragraph 16.1 applies to the holder of a flight crew licence whether or not the person is employed by the holder of an AOC or a Part 141 or Part 142 certificate mentioned in paragraph 4.1 or 4.2.

*Note* Under regulation 11.077 of CASR, it is an offence for a person holding a flight crew licence to contravene a condition of the licence.

- 4.5 This CAO takes effect for the holder of an AOC or a Part 141 certificate (a **holder**) on 2 September 2019, unless it takes effect for the holder at a later date in accordance with subsection 5.
- 4.6 This CAO takes effect for a flight crew member as follows:
- (a) subject to subparagraph (b), for each flight crew member of a holder — when it takes effect for the holder;
  - (b) for any flight crew member on a flight conducted as a private operation — on 2 September 2019.

## 5 Saving and transitional provisions for this CAO to take effect

- 5.1 In this subsection:

**2013 CAO** means the *Civil Aviation Order 48.1 Instrument 2013*, as in force immediately before 2 September 2019.

**2013/2016 CAO** means the 2013 CAO as it would have been in force immediately before 2 September 2019 had it been amended by the *Civil Aviation Order 48.1 Amendment Instrument 2016 (No. 1)*.

**grandfathered Part 141 certificate** means the Part 141 certificate of a grandfathered Part 141 operator.

**grandfathered Part 141 operator** means each of the following:

- (a) a Part 141 operator who between the beginning of 30 April 2013 and the end of 31 August 2014 continuously held an AOC;
- (b) a Part 141 operator who, before 30 April 2013, applied for an AOC which was:
  - (i) issued after 30 April 2013; and
  - (ii) continuously held between the date it was issued and the end of 31 August 2014.

**had not opted in**, for a grandfathered person, means that the person had not, before 2 September 2019, told CASA, under the relevant terms of the 2013 CAO or the 2013/2016 CAO, that the person intended to comply with the 2013 CAO or the 2013/2016 CAO.

**had opted in**, for a person, means that the person had, before 2 September 2019, told CASA, under the relevant terms of the 2013 CAO or the 2013/2016 CAO, that the person intended to comply with the 2013 CAO or the 2013/2016 CAO.

**this CAO** means the *Civil Aviation Order 48.1 Instrument 2019*.

**transition date**, for a person, means 1 of the following:

- (a) 1 July 2020 — unless paragraph (b) applies;
- (b) 1 October 2020 — but only if the person:
  - (i) is:
    - (A) an AOC holder, other than an AOC holder engaged in regular public transport (**RPT**) operations in high capacity aircraft to whom CAO 82.5 applies; or
    - (B) a Part 141 operator; and
  - (ii) applied to CASA for an FRMS on or before 30 June 2020.

*Note* If the 30 June 2020 application date mentioned in sub-subparagraph (b) (ii) is not complied with by relevant AOC holders and Part 141 operators, a trial FRMS approval under Appendix 7 will not be issued by CASA for the 1 October 2020 transition date and operators must be operating under 1 or more of the other Appendices from 1 July 2020.

### AOCs and Part 141 certificates granted after 2 September 2019

- 5.2 For a person who, on or after 2 September 2019, applies for an AOC, or a Part 141 certificate to which this CAO applies, this CAO takes effect on and from the day the AOC or certificate is granted.
- 5.3 This CAO takes effect on the transition date for a person who:
- (a) before 2 September 2019, applied for an AOC or a Part 141 certificate to which this CAO applies; and
  - (b) is granted the AOC or certificate after 2 September 2019; and
  - (c) until immediately before the transition date — complies with the requirements of the 2013/2016 CAO, as if that CAO had not been repealed.

### AOCs and non-grandfathered Part 141 certificates granted between 30 April 2013 and 2 September 2019

- 5.4 This CAO takes effect on the transition date for a person who:
- (a) was granted an AOC or a Part 141 certificate (other than a grandfathered Part 141 certificate) on or after 30 April 2013 but before 2 September 2019; and
  - (b) until immediately before the transition date — complies with the requirements of the 2013 CAO or (if the person had opted in) the 2013/2016 CAO, as if that CAO had not been repealed.

### Grandfathered AOC holders and Part 141 operators

- 5.5 Subject to paragraph 5.9, this CAO takes effect on the transition date for a person (a ***grandfathered person***) who:
- (a) was an AOC holder immediately before 30 April 2013, or a grandfathered Part 141 operator; and
  - (b) had not opted in to the 2013 CAO or the 2013/2016 CAO; and
  - (c) until immediately before the transition date — complies with the requirements of an applicable CAO mentioned in paragraph 3.1, 3.2, 3.3 or 3.4, including any relevant exemption, as if that CAO and that exemption (if any) had not been repealed.

### Opted-in AOC holders and Part 141 operators

- 5.6 This CAO takes effect on the transition date for a person who:
- (a) is an AOC holder or a Part 141 operator; and
  - (b) had opted in to the 2013 CAO or the 2013/2016 CAO; and
  - (c) until immediately before the transition date — complies with the requirements of the 2013 CAO or (if the person had opted in) the 2013/2016 CAO, as if that CAO had not been repealed.

### Early opt in to this CAO

- 5.7 A person to whom paragraph 5.3, 5.4, 5.5 or 5.6 applies may tell CASA in writing that the person intends to comply with this CAO from a specified date before the transition date and, if so, this CAO takes effect for the person on and from the specified date.

## Flight crew members

- 5.8 Each flight crew member of an AOC holder or a Part 141 operator must comply with the applicable requirements of any CAO (including this CAO) that applies to, and takes effect for, the holder or the operator in accordance with this subsection.

## Transition for grandfathered high-capacity RPT operators

- 5.9 If paragraph 5.5 applies to an AOC holder engaged in RPT operations in high capacity aircraft to whom CAO 82.5 applies, the AOC holder must, on or before 30 November 2019:
- (a) if the AOC holder intends to apply for an FRMS in accordance with Appendix 7 — submit to CASA an application for the approval of an FRMS; and
  - (b) if the AOC holder does not intend to apply for an FRMS:
    - (i) submit to CASA in writing a detailed outline of the actions already taken by the AOC holder to prepare to transition to this CAO; and
    - (ii) submit to CASA in writing a plan describing the actions that the AOC holder will take, including a timeline for completing those actions, that will ensure the AOC holder complies with this CAO on or before the transition date; and
  - (c) in either case — satisfy CASA that its SMS and HF&NTS program required by CAO 82.5 is functioning in a way that meets the enhanced fatigue management obligations under subsection 15 of this CAO.

*Note* By virtue of the definition of *transition date* in paragraph 5.1, whether or not an FRMS is to be used, an AOC holder engaged in RPT operations in high capacity aircraft to whom CAO 82.5 applies must be compliant with this CAO by not later than 1 July 2020, having met the obligations mentioned in paragraph 5.9.

- 5.10 A reference in subparagraph 5.3 (c), 5.4 (b), 5.5 (c) or 5.6 (c) to a person complying with the requirements of an applicable CAO, the 2013 CAO or the 2013/2016 CAO (as the case requires) (the *relevant CAO*), means the person must comply with the relevant CAO unless CASA, in writing, approves limited or minor non-compliance by the person with the requirements of a specified provision of the relevant CAO:
- (a) for the purposes of an emergency service operation; and
  - (b) subject to compliance with safety conditions expressed in the approval.

## 5A Approval of non-compliance

- 5A.1 CASA may, on application or on its own initiative, by instrument in writing, approve limited or minor non-compliance with the requirements of a specified provision of this CAO.
- 5A.2 An approval has the effect that the specified provision of this CAO does not apply to the AOC holder to whom the approval applies, provided that any conditions expressed in the approval are complied with.
- Note* The expression AOC holder includes a Part 141 certificate holder: see the definition of *AOC holder* in subsection 6.
- 5A.3 An approval mentioned in paragraph 5A.2 has the effect that the specified provision of this CAO does not apply to the AOC holder's flight crew members.
- 5A.4 CASA must not grant an approval unless CASA is satisfied that compliance with the approval, including any conditions of the approval, will preserve an acceptable level of aviation safety.

- 5A.5 An instrument of approval is a legislative instrument if the instrument is expressed to apply to a class of AOC holders.
- 5A.6 An instrument of approval is not a legislative instrument if the instrument is expressed to apply to a particular AOC holder.

## 6 Definitions

### 6.1 In this CAO:

**access**, in a provision referring to 1 or more of the following (*necessities*):

- (a) a crew rest facility;
- (b) suitable sleeping accommodation;
- (c) suitable resting accommodation;
- (d) adequate sustenance;

means that there is no restriction on, or impediment to, a flight crew member's immediate and actual use of the necessity:

- (e) in accordance with the provision; or
- (f) if the provision is a definition — in accordance with a provision which uses the defined term.

**acclimatised** has the meaning given in subsection 7.

**acclimatised time** means local time at the location where an FCM is acclimatised.

**Act** means the *Civil Aviation Act 1988*.

**adaptation period** means a continuous off-duty period for an FCM to become acclimatised to a particular location.

**adequate sustenance** means food and drink, including clean drinking water, in quantities sufficient to reasonably sustain a person in the person's circumstances.

**AOC** means an Air Operator's Certificate.

**AOC holder**, or **holder**, means the holder of an Air Operator's Certificate issued under Part III, Division 2 of the Act but, except in subsections 4 and 5, is also taken to include the holder of a Part 141 certificate to whom this CAO applies.

*Note* See also paragraph 6.4.

**approval** means approval in writing.

**assigned** means assigned by the AOC holder to his or her FCM.

*Note* For example, the AOC holder *assigns* to the FCM *duty*, *standby*, a *home base*, a *flight duty period*, a *reporting time*.

**augmented crew operation** means an aircraft operation in which 1 or more FCMs, additional to the minimum required number of FCMs, are engaged in a flight to allow 1 or more FCMs to be relieved of duty during flight time.

**authorised Part 141 flight training** has the same meaning as in subregulation 141.015 (2) of CASR but does not include flight training that is conducted in a flight simulation training device as the sole and exclusive form of training conducted by the operator.

**authorised Part 142 activity** has the same meaning as in subregulation 142.015 (3) of CASR but does not include flight training that is conducted in a flight simulation training device as the sole and exclusive form of training conducted by the operator.

**bed**, for suitable sleeping accommodation, includes at least 1 pillow, clean bed linen, and bed covering appropriate for the temperature of the accommodation.

**call out** means being required by an AOC holder to commence a duty period during a standby.

**CAR** means the *Civil Aviation Regulations 1988*.

**CASR** means the *Civil Aviation Safety Regulations 1998*.

**Chief Executive Officer** means the person who is:

- (a) if the AOC holder is an individual — that individual; or
- (b) if the AOC holder is a corporation — the person (however described) whom CASA was satisfied, for subparagraph 28 (1) (b) (iv) of the Act (and the definition of **key personnel** in subsection 28 (3) of the Act), could hold or carry out the duties of the AOC holder's Chief Executive Officer.

**complex operation** means an operation which involves 1 or more of the following:

- (a) an FDP with a displacement time of 2 hours or more;
- (b) an augmented crew operation;
- (c) an FDP that commences when the FCM is:
  - (i) in an unknown state of acclimatisation; or
  - (ii) acclimatised to a location other than the location where the FDP commences.

*Note* AOC holders should consider the impact of Daylight Saving Time on local time differences for relevant locations because Daylight Saving Time may have an impact on whether or not an operation is complex.

**consecutive**, in relation to the hours or days of a period of time mentioned in a provision of this CAO, means a continuous, unbroken, period of time for the duration of the hours or days mentioned.

**crew member** has the same meaning as in the Regulations.

*Note* Under regulation 2 of CAR, **crew member** means a person assigned by an operator for duty on an aircraft during flight time, and any reference to **crew** has a corresponding meaning.

**crew rest facility** means 1 of the following defined classes of facility on board an aircraft that is available to an FCM:

- (a) **class 1**, which means a bunk or other surface that:
  - (i) is fit for the purpose of an FCM obtaining sleep in a horizontal sleeping position; and
  - (ii) is located separate from both the flight deck and passenger compartment in an area that:
    - (A) is temperature-controlled; and
    - (B) allows the FCM to control light; and
    - (C) provides isolation from noise and disturbance;
- (b) **class 2**, which means a seat in an aircraft cabin that:
  - (i) is fit for the purpose of an FCM obtaining sleep in a horizontal or near-horizontal sleeping position; and
  - (ii) is separated from passengers by at least a curtain that provides darkness and some noise mitigation; and
  - (iii) is reasonably free from disturbance by passengers or crew members;
- (c) **class 3**, which means a seat in an aircraft cabin or flight deck that:
  - (i) is fit for the purpose of an FCM obtaining rest; and
  - (ii) reclines at least 40 degrees from the vertical plane; and
  - (iii) provides leg and foot support in the reclined position.

***cruise*** means the period of a flight from not less than 30 minutes after take-off until not less than 60 minutes before the estimated time of landing.

***cumulative duty*** means the progressive sum of duty periods.

***cumulative flight time***, for an FCM, means the progressive total of flight time accrued by the FCM when acting as a crew member on board any aircraft, but excluding flight time accrued during recreational private operations.

***day*** means the period between local midnight at home base and the subsequent local midnight at home base.

***displacement time*** means the difference in local time between:

- (a) the place where an FCM commenced an FDP; and
- (b) the place where the FCM undertakes an off-duty period following the FDP.

***duty*** means any task that a person who is employed as an FCM is required to carry out associated with the business of an AOC holder.

***duty period*** means a period of time which:

- (a) starts when an FCM is required by an AOC holder to report for duty; and
- (b) ends when the FCM is free of all duties.

*Note* A duty period includes any time spent by the FCM in positioning. See the definition of ***positioning*** in subparagraph 6.3 (e).

***early start***, for an FDP of an FCM, means:

- (a) in Appendix 2:
  - (i) if the FCM is acclimatised — an FDP that commences between the hours of 0500 and 0659 local time at the location where the FCM is acclimatised; or
  - (ii) if the FCM is in an unknown state of acclimatisation — an FDP that commences between the hours of 0500 and 0659 local time at the location where the FCM was last acclimatised; and
- (b) for an Appendix other than Appendix 2 — an FDP that commences between the hours of 0500 and 0659 local time at the location where an FCM commences the FDP.

***emergency service operation*** means an operation involving an aircraft:

- (a) for the purpose of law enforcement, or saving or protecting life or property; and
- (b) conducted by, or at the request of, an organisation recognised by an Australian governmental agency as having responsibility to conduct or request the operation as part of the organisation's functions.

***employment*** includes employment under a contract for services.

***fatigue***, for an FCM, means a physiological state of reduced alertness or capability to perform mental or physical tasks, which:

- (a) may impair the ability of the FCM to safely operate an aircraft; and
- (b) is caused by 1 or more of the following:
  - (i) the FCM's lack of sleep;
  - (ii) the FCM's extended wakefulness;
  - (iii) the FCM's circadian phase at any relevant time;
  - (iv) the FCM's workload of mental activities, or physical activities, or mental and physical activities at any relevant time.

**fatigue risk management system** (or **FRMS**) means a comprehensive system for managing fatigue-related risks that:

- (a) is appropriate for the size, nature and complexity of the AOC holder's operations; and
- (b) includes all of the elements set out in Appendix 7; and
- (c) is approved for implementation by CASA.

**fit for the purpose**, for a crew rest facility, or suitable sleeping accommodation, means that the facility, or accommodation, has ergonomic characteristics which make it suitable for an FCM to obtain sleep or rest, as the case requires.

*Note* CASA has issued guidance on relevant ergonomic characteristics in CAAP 48-01.

**flight crew licence**:

- (a) until immediately before 1 September 2014 — has the meaning given in subregulation 2 (1) of CAR; and
- (b) on and from 1 September 2014 — means a flight crew licence within the meaning of regulation 61.010 of CASR.

**flight crew member** (or **FCM**) has the same meaning as in the Regulations. The abbreviation **FCMs** means more than 1 FCM.

*Note* Under Part 1 of the CASR Dictionary, **flight crew member** means a crew member who is a pilot or flight engineer assigned to carry out duties essential to the operation of an aircraft during flight time. Any reference to **flight crew** has a corresponding meaning.

**flight duty period** (or **FDP**) means a period of time which:

- (a) starts when a person is required by an AOC holder to report for a duty period in which 1 or more flights as an FCM are undertaken; and
- (b) ends at the later of:
  - (i) the person's completion of all duties associated with the flight, or the last of the flights; or
  - (ii) 15 minutes after the end of the person's flight, or the last of the flights.

*Note* See also the definition of **positioning**.

**flight review** has the same meaning as in regulation 61.010 of CASR.

*Note* **Flight review** means an assessment of the competency of an FCM to perform:

- (a) for the holder of a pilot licence or flight engineer licence — an activity authorised by a flight crew rating that the crew member holds; or
- (b) for the holder of a glider pilot licence — an activity authorised by the licence.

**flight time**, for an FCM, means such part of the total time mentioned for an aircraft in subparagraph (a) or (b) (as the case may be) which occurs while the FCM is acting as a crew member on board the aircraft:

- (a) in the case of a heavier-than-air aircraft — the total time from the moment at which the aircraft first moves under its own power for the purpose of taking-off, until the moment at which it comes to rest after landing; and
- (b) in the case of a lighter-than-air aircraft — the total time from the moment at which the aircraft first becomes airborne until it comes to rest on the ground, excluding any time during which the aircraft is moored.

*Note* Thus, flight time for an FCM does not include the time he or she spends in positioning.

**flight training** has the same meaning as in regulation 61.010 of CASR and, to avoid doubt, includes flight training associated with aerial work.

*Note* **Flight training**, for a flight crew licence, rating or endorsement, means the training mentioned in regulation 61.195 of CASR for the licence, rating or endorsement.

***flight training associated with aerial work*** means flight training for the grant, under Part 61 of CASR, of a rating or endorsement mentioned in subparagraph (a), (b), (c) or (d):

- (a) the following operational ratings:
  - (i) low-level rating;
  - (ii) aerial application rating;
  - (iii) night vision imaging system rating;
- (b) endorsements for the following operational ratings:
  - (i) low-level rating;
  - (ii) aerial application rating;
  - (iii) night vision imaging system rating;
- (c) the following endorsements on the flight instructor rating:
  - (i) low-level rating training endorsement (category specific);
  - (ii) aerial application rating (day) training endorsement (category specific);
  - (iii) aerial application rating (night) training endorsement (category specific);
  - (iv) night vision imaging system rating training endorsement;
  - (v) sling operations training endorsement;
  - (vi) winching and rappelling operations training endorsement;
- (d) the following endorsements on the flight examiner rating:
  - (i) low-level rating flight test endorsement (category specific);
  - (ii) aerial application rating flight test endorsement (category specific);
  - (iii) night vision imaging system rating flight test endorsement.

***FRMS Manager*** means the person in an AOC holder's organisation who is appointed by the Chief Executive Officer to be responsible for the day-to-day implementation, management and continuing effectiveness of the AOC holder's FRMS.

***home base*** means the location, assigned by the AOC holder to the FCM, from where the FCM normally starts and ends a duty period or a series of duty periods.

***in-flight rest*** means, in an augmented crew operation, the period of time, or periods of time, during which an FCM has access to a crew rest facility.

***late-night operation*** means an operation where an FDP includes more than 30 minutes between the hours of 2300 and 0530 local time.

***local night*** means a period of 8 consecutive hours which includes the hours between 2200 and 0500 local time.

***local time***, for a location, means:

- (a) local time in the time zone of the location; or
- (b) local time in a time zone (the ***alternative local time***):
  - (i) that adjoins the time zone of the location; and
  - (ii) whose nearest boundary is reasonably proximate to the location; provided the alternative local time is:
    - (iii) specified in the AOC holder's operations manual; and
    - (iv) used consistently as local time for the location, for the purposes of this CAO.

*Note 1* CASA considers an alternative time zone to be used consistently as local time for a location if it is used, for example, throughout a period of daylight saving in the location or the adjoining time zone.

*Note 2* Examples of where an AOC holder may consider using alternative local time are as follows:

Local time	Alternative local time
Gold Coast airport, Queensland summertime	NSW
Kununurra airport, Western Australia	NT

***medical personnel*** means a person with medical, paramedical or nursing qualifications, and responsibilities directly related to the qualifications.

***medical transport operation*** means an aircraft operation consisting of 1 or more flights for any of the following purposes:

- (a) delivery of urgent medical assistance to a person, when determined to be necessary by a medical transport tasker;
- (b) transportation of any of the following, when determined to be necessary by a medical transport tasker:
  - (i) an ill or injured person;
  - (ii) another person directly involved with the person mentioned in sub-subparagraph (i);
 

*Note* For example, a close relative or the police.
  - (iii) medical personnel intended to be, or who are, directly involved with the person mentioned in sub-subparagraph (i);
  - (iv) blood, tissue or an organ for transfusion, grafting or transplantation (an ***item***), including a person who has authorised custody of the item;
- (c) the return of the aircraft to its base because an operation mentioned in subparagraph (a) or (b) is completed.

***medical transport tasker*** means:

- (a) medical personnel; or
- (b) an organisation whose purpose is, or whose purposes include, medical transport tasking.

***multi-pilot operation***:

- (a) means an aircraft operation conducted under multi-pilot procedures contained in the AOC holder's operations manual; but
- (b) does not include:
  - (i) contracted checking, within the meaning of regulation 142.020 of CASR; or
  - (ii) contracted recurrent training within the meaning of regulation 142.020 of CASR;

unless the training or checking is conducted as a multi-crew operation within the meaning of regulation 61.010 of CASR.

***mustering operation*** means an aircraft operation to herd or otherwise control livestock, and includes the following:

- (a) aerial mustering within the meaning of CAO 29.10;
- (b) aerial livestock spotting;

- (c) aerial livestock culling;
- (d) flight training associated with aerial work for any of the activities mentioned in this definition.

**off-duty period** means a period of time during which an FCM is free of all duties and standby associated with his or her employment.

**operator proficiency check** has the same meaning as in regulation 61.010 of CASR.

*Note* An **operator proficiency check** means an assessment conducted by an operator in accordance with its training and checking responsibilities under the Regulations of whether a person has the aeronautical skills and knowledge required by the operator.

**Part 141 certificate** means the Part 141 certificate of a Part 141 operator to whom this CAO applies and, to that extent only, has the same meaning as in subregulation 141.015 (4) of CASR.

*Note* See also paragraph 4.2 which excludes from the scope of the CAO a Part 141 operator whose training is conducted exclusively through the use of a flight simulation training device. In subregulation 141.015 (4) of CASR, a **Part 141 certificate** is defined as a certificate issued under regulation 141.060 of CASR. Except in paragraph 2.2, and subsections 4 and 4B, a reference in this CAO to an AOC holder is taken to include a Part 141 operator: see paragraph 6.4.

**Part 141 operator** means a Part 141 operator to whom this CAO applies and, to that extent only, has the same meaning as in subregulation 141.015 (3) of CASR.

*Note* See also paragraph 4.2 which excludes from the scope of the CAO a Part 141 operator whose training is conducted exclusively through the use of a flight simulation training device. In subregulation 141.015 (3) of CASR, a **Part 141 operator** is defined as the holder of a Part 141 certificate. Except in paragraph 2.2, and subsections 4 and 4B, a reference in this CAO to an AOC holder is taken to include a Part 141 operator: see paragraph 6.4.

**Part 142 operator** means a Part 142 operator to whom this CAO applies and, to that extent only, has the same meaning as in subregulation 142.015 (4) of CASR.

*Note* See also paragraph 4.2 which excludes from the scope of the CAO a Part 142 operator whose activity is conducted exclusively through the use of a flight simulation training device.

**positioning** is defined in paragraph 6.3.

**reassign** means to assign to an FCM in a modified form that which had previously been assigned to the FCM.

**recreational private operation** means flying conducted by an FCM in a personal capacity, and at and for the FCM's leisure.

*Note* A flight conducted by an FCM as a private operation is not a recreational private operation if it is conducted for, or on behalf of, an entity, regardless of whether or not the entity is an AOC holder.

**reporting time** means the time assigned to an FCM to commence an FDP.

**roster** means a list made available to an FCM by an AOC holder setting out the times when the FCM is assigned to undertake duties or standby.

**sector**, for this CAO, has the following meanings:

- (a) except for a rotorcraft — any flight consisting of a take-off and a landing, when conducted by a person in the capacity of an FCM;
- (b) for a rotorcraft — the period:
  - (i) from when the rotor blades start turning until they stop turning; and
  - (ii) during which an FCM on the rotorcraft conducts 1 or more flights, each consisting of a take-off and a landing;
- (c) each hour, or each part of an hour, of an FDP spent in a synthetic training device.

**single-pilot operation** means any operation other than a multi-pilot operation.

**sleep opportunity** means a period of time during an off-duty period when an FCM:

- (a) is not meeting the reasonable requirements of bodily functioning such as eating, drinking, washing or dressing; and
- (b) has access to suitable sleeping accommodation without, under normal circumstances, being interrupted by any requirement of the AOC holder.

*Note* When an FCM is interrupted during sleep opportunity, this may affect the FCM's fitness for duty before the commencement of, or during, the next FDP.

**SMS** means a safety management system approved by CASA.

**split duty** means an FDP which contains a split-duty rest period.

**split-duty rest period** means a predefined period of time (or, for Appendix 4B or Appendix 5, a period of time that may or may not be predefined) during which an FCM:

- (a) has access to suitable resting accommodation or suitable sleeping accommodation; and
- (b) is relieved of all duties associated with his or her employment by the AOC holder.

**standby** means a period of time during which an FCM:

- (a) is required by an AOC holder to hold himself or herself available for duties; and
- (b) has access to suitable sleeping accommodation; and
- (c) is free from all duties associated with his or her employment.

*Note* If suitable sleeping accommodation is not available for an FCM, who is required by an AOC holder to hold himself or herself available for duty, the FCM will be considered to be on duty and not on standby.

**standby-like arrangement** means a period of time during which an FCM:

- (a) is required by an AOC holder to hold himself or herself available for duties; and
- (b) has no access to suitable sleeping accommodation.

**suitable resting accommodation** means a comfortable resting area:

- (a) which has a comfortable temperature and minimal noise levels; and
- (b) which contains at least a comfortable chair; and
- (c) at which the FCM has access to adequate sustenance at times appropriate to the duty requirements.

*Note* Suitable resting accommodation is solely for split-duty rest periods. Suitable sleeping accommodation may also be used for split-duty rest periods.

**suitable sleeping accommodation** means accommodation, not within an aircraft, that is fit for the purpose of an FCM obtaining sleep, and that includes the following:

- (a) a comfortable room, compartment or facility;
- (b) a single occupancy, at the discretion of the FCM;
- (c) access to clean, tidy and hygienic amenities, including a toilet and hand washing basin;
- (d) a bed that is comfortable, flat and horizontal, allowing the occupant to sleep on his or her stomach, and back, and either side;
- (e) minimum noise levels, including low occurrence of random noise;

- (f) the means to control light, temperature and ventilation;
- (g) access to adequate sustenance.

*Note* A person's home or residence is considered to meet the requirements of **suitable sleeping accommodation**.

**synthetic training device** has the same meaning as in the Regulations.

*Note* Under the Dictionary in CASR, **synthetic training device** means a flight simulator, a flight training device, or a basic instrument flight trainer.

**the Regulations** means CAR and CASR, as in force from time to time.

*Note* The effect of regulation 2C is that **the Regulations**, CAR and CASR, are to be read together.

**time zone** means a defined region of the earth with a uniform local time which differs by 1 hour, or by part of 1 hour, from the uniform local time of an adjoining region of the earth.

**unforeseen operational circumstance** means an unplanned exceptional event that becomes evident after the commencement of the FDP, such as unforecast weather, equipment malfunction, or air traffic delay.

*Note* Guidance on the application of **unforeseen operational circumstances** is contained in CAAP 48-01.

**window of circadian low**, or **WOCL**, for an FCM, means:

- (a) in Appendix 2:
  - (i) if the FCM is acclimatised — the period between the hours of 0200 and 0559 local time at the location where the FCM is acclimatised; or
  - (ii) if the FCM is in an unknown state of acclimatisation — the period between the hours of 0200 and 0559 local time at the location where the FCM was last acclimatised; and
- (b) in an Appendix other than Appendix 2 — the period between the hours of 0200 and 0559 local time at the location where the FCM commences a duty period.

**written application**, for an approval, means the written application of the AOC holder who is seeking the approval.

6.2 In this CAO, if any duty is performed during all, or any part, of the period of the **WOCL**, the WOCL is infringed.

6.3 For this CAO, **positioning**, for a person who is employed as an FCM:

- (a) means being transported, as a passenger, to a location, by any mode of transportation, as required by the AOC holder; and
- (b) does not include being transported to or from suitable accommodation after or before an FDP; and
- (c) if undertaken immediately before duty that includes the person flying an aircraft as an FCM (**flying duty**) — must be considered part of his or her FDP; and
- (d) if undertaken immediately after the person's flying duty and no other flying duty is to be conducted in the duty period — is not part of his or her FDP or off-duty period; and
- (e) is duty and part of the duty period.

*Note* The time spent positioning following an FDP, as described in subparagraph 6.3 (d), is not part of the FDP or off-duty period. However, it is added to the FDP for calculating off-duty period requirements. See, for example, clause 10 in Appendix 2.

- 6.4 The expression, *the operations manual*, when used in a provision of this CAO, is taken to mean whichever of the following the Regulations require of the AOC holder to whom the provision applies:
- (a) the operations manual of the AOC holder;
  - (b) the exposition of the AOC holder.
- 6.5 In this CAO, other than subsections 4 and 5:
- (a) a reference to an AOC is taken to include a Part 141 certificate; and
  - (b) a reference to an AOC holder, or a holder, is taken to include a Part 141 operator; and
  - (c) a reference to an FCM of an AOC holder (however described), is taken to include an FCM of a Part 141 operator.

## 7 Determination of acclimatisation

- 7.1 At the commencement of an FDP or an off-duty period at a location, an FCM must be considered to be acclimatised to the location if:
- (a) the location differs in local time by less than 2 hours from the location where the FCM was last acclimatised; and
  - (b) the FCM has remained in an acclimatised state since he or she was last acclimatised.

*Note* AOC holders and FCMs should be aware that a determination of acclimatisation under this definition may impact on an individual's body clock to a small degree. For guidance on acclimatisation, AOC holders and FCMs should refer to CAAP 48-01.

- 7.2 At the commencement of an FDP or an off-duty period (a *period*) at a new location which differs in local time by 2 hours or more from the location where the FCM was last acclimatised (the *original location*), the FCM is considered to remain acclimatised to the original location if the period at the new location commences less than 36 hours after the FCM commenced a duty period at the original location.
- 7.3 At the commencement of an FDP or an off-duty period (a *period*) at a new location which differs in local time by 2 hours or more from the location where the FCM was last acclimatised (the *original location*), the FCM is considered to be in an unknown state of acclimatisation if the period at the new location commences 36 hours or more after the FCM commenced a duty period at the original location.
- 7.4 An FCM is considered to remain in his or her state of acclimatisation (whether acclimatised to a particular location, or in an unknown state of acclimatisation) until he or she has had:
- (a) an adaptation period in a location (the *adaptation location*) in accordance with Table 7.1 in this subsection; or
  - (b) an adaptation period that is:
    - (i) in a location other than home base; and
    - (ii) in accordance with subparagraph (a); and
    - (iii) reduced by 12 hours for each previous off-duty period that:
      - (A) immediately preceded the adaptation period; and
      - (B) was taken at an off-duty location which differs in local time by less than 2 hours from the adaptation location; and
      - (C) included an off-duty location local night.
- 7.5 In applying Table 7.1 to arrive at an adaptation period for paragraph 7.4:
- (a) determine the time zone displacement between:

- (i) the location where the FCM was last acclimatised (the *original location*);  
and
- (ii) each location where an FDP or off-duty period was commenced since last acclimatised (*later locations*); and
- (b) then choose the time zone displacement between the original location and whichever of the later locations gives the greatest time zone displacement;  
and
- (c) then choose the time zone change in the Table that corresponds to the greatest time zone displacement; and
- (d) then choose the direction (west or east) in which the FCM travelled and in which, therefore, the greatest time zone displacement occurred under subparagraph (b); and
- (e) then choose the number of hours west or east (as the case requires) that corresponds to the time zone change chosen under subparagraph (c).

**Table 7.1 Adaptation period to become acclimatised**

Time zone change (measured in time zones)	Adaptation period to become acclimatised to new location (hours)	
<i>Note</i> See definition of <i>time zone</i>	<i>West</i>	<i>East</i>
<b>2</b>	24	30
<b>3</b>	36	45
<b>4</b>	48	60
<b>5</b>	48	60
<b>6</b>	48	60
<b>7</b>	72	90
<b>8</b>	72	90
<b>9</b>	72	90
<b>10 or more</b>	96	120

*Note 1* **Adaptation period** means a continuous off-duty period for an FCM to become acclimatised to a particular location.

*Note 2* An adaptation period under paragraph 7.4 may commence before the time when an FCM comes to be in an unknown state of acclimatisation.

*Note 3* For guidance in determining acclimatisation, including examples of how an FCM becomes reacclimatised in accordance with paragraph 7.4, AOC holders and FCMs should refer to CAAP 48-01.

## **PART 2      CONDITIONS**

### **8      General condition on Air Operators' Certificates**

Each AOC is subject to the condition that the AOC holder must:

- (a) comply with each requirement for the AOC holder as set out in this CAO; and
- (b) comply with the limits and requirements for an FCM as provided for by each Appendix of this CAO which the AOC holder applies to the FCM; and
- (c) ensure that each of the AOC holder's FCMs, when acting as such, complies with each requirement imposed by this CAO on flight crew licences.

### **9      General conditions on flight crew licences**

- 9.1 The flight crew licence of an AOC holder's FCM is subject to the condition that the FCM must comply with each limit and requirement imposed on the FCM by this CAO.
- 9.2 The flight crew licence of an FCM in a private operation is subject to the condition that the FCM must comply with the requirement imposed on the FCM by paragraph 16.1 of this CAO.

*Note* Under regulation 11.077 of CASR, breach of a flight crew licence condition is a strict liability offence.

## PART 3 LIMITS AND REQUIREMENTS

### 10 Limits and requirements for operations

- 10.1 Subject to subsections 11, 12 and 13, for an aircraft operation mentioned in column 1 of Table 10.1, an AOC holder must:
- choose at least 1 of the Appendices in column 2 of the Table that corresponds to the operation; and
  - comply with the limits and requirements for FCMs mentioned in whichever 1 or more of the Appendices in column 2 of the Table the holder chooses that corresponds to the operation; and
  - for each kind of operation conducted by the holder — specify in the operations manual the Appendix or Appendices with which the holder has chosen to comply.

*Note 1* In this subsection, and generally throughout the CAO, a reference to an AOC holder is taken to include a reference to a Part 141 operator: see paragraph 6.4, but also paragraph 4.2.

*Note 2* This CAO, including the limits and requirements under subsection 10, does not apply to flight training in a flight simulation training device. However, if an AOC holder requires an FCM to carry out flight training in a flight simulation training device (*FSTD*) as well as flight duties, the training in the FSTD must be counted as duty by virtue of the definition of *duty* in subsection 6.

**Table 10.1 Limits and requirements for operations**

Column 1 — Operation	Column 2 — Appendix
Any operation.	Appendix 1
Any multi-pilot operation, except flight training.	Appendix 2
Any multi-pilot operation, except: <ol style="list-style-type: none"> <li>a complex operation; and</li> <li>flight training.</li> </ol>	Appendix 3
Any operation.	Appendix 4
Any balloon operation.	Appendix 4A
Any of the following: <ol style="list-style-type: none"> <li>a medical transport operation;</li> <li>an emergency service operation;</li> <li>flight training for an operation mentioned in paragraphs (a) and (b);</li> <li>an operator proficiency check for an operation mentioned in paragraph (a) or (b);</li> <li>a flight review for an operation mentioned in paragraph (a) or (b).</li> </ol>	Appendix 4B
Any of the following: <ol style="list-style-type: none"> <li>an aerial work operation;</li> <li>flight training associated with aerial work;</li> <li>an operator proficiency check for an operation mentioned in paragraph (a);</li> <li>a flight review for an operation mentioned in paragraph (a).</li> </ol>	Appendix 5

Column 1 — Operation	Column 2 — Appendix
Any of the following: (a) an aerial work operation, conducted during daylight hours only; (b) flight training associated with aerial work conducted during daylight hours only; (c) an operator proficiency check for an operation mentioned in paragraph (a); (d) a flight review for an operation mentioned in paragraph (a).	Appendix 5A
Any of the following: (a) flight training; (b) a proficiency check; (c) a flight review.	Appendix 6
Any operation.	Appendix 7 <i>Note</i> Use of Appendix 7 requires CASA approval.

10.2 Subject to subsections 11 and 13, each FCM of an AOC holder must comply with the limits and requirements mentioned in the Appendix or Appendices which the AOC holder has chosen to comply with under paragraph 10.1.

## 11 Part 137 operations

11.1 Despite any other provision of this Order, this subsection takes effect on 2 September 2019.

11.2 In this subsection:

***relevant operation*** means an aerial application operation in an aeroplane under Part 137 of CASR.

*Note* Subsection 11 has no application to aerial application operations in a helicopter.

11.3 Except for this subsection, paragraph 16.1 and any relevant definitions in subsection 5, this CAO does not apply to:

- (a) an AOC holder engaged in a relevant operation;
- (b) an FCM employed by, and undertaking duties for, the AOC holder mentioned in subparagraph (a).

11.4 It is a condition on the AOC of an AOC holder mentioned in subparagraph 11.3 (a) that the holder must comply with Subpart 137.Q of CASR.

*Note* Such AOC holders are bound by Subpart 137.Q of CASR and there are penalties under Subpart 137.Q for failure to comply.

11.5 It is a condition on the flight crew licence of an FCM mentioned in subparagraph 11.3 (b) that the FCM must comply with Subpart 137.Q of CASR.

*Note* Such FCMs are bound by Subpart 137.Q of CASR and there are penalties under Subpart 137.Q for failure to comply.

11.6 Subject to paragraph 11.7, before an FCM conducts a relevant operation for an AOC holder, the holder must be satisfied that the FCM has received awareness material, or training, in managing the fatigue-related risks relevant to his or her duties as an FCM.

11.7 Paragraph 11.6 does not apply until 1 July 2020 to an AOC holder for a relevant operation if the holder held an AOC for the relevant operation immediately before 30 April 2013.

## **12 Private operations**

12.1 Subject to paragraph 12.3, this CAO does not apply to an AOC holder when conducting private operations.

12.2 Subject to the condition mentioned in paragraph 16.1, and paragraph 12.3, this CAO does not apply to an FCM when conducting private operations.

*Note* The condition under paragraph 16.1 applies to FCMs whether or not they are employed by an AOC holder. Paragraph 16.1, therefore, applies to FCMs engaged in private operations as well as FCMs engaged in operations under an AOC. Guidance on the assessment of individual cognitive and physical fitness is contained in CAAP 48-01. CASA recommends that FCMs engaged in private operations consider this guidance in determining self-prescribed limits.

12.3 Despite paragraphs 12.1 and 12.2, if an FCM performs duty by conducting a private operation (a *private flight*) during an FDP that involves a flight that is not a private operation (a *commercial flight*), the rules in paragraph 12.4 apply in relation to the FCM.

12.4 For paragraph 12.3:

- (a) if the private flight is conducted *before* any commercial flight is conducted — the private flight time must be taken to be part of the FCM's FDP and must not be taken to be part of the FCM's off-duty period; and
- (b) if the private flight is conducted *between* commercial flights — the private flight time must be taken to be part of the FCM's FDP and must not be taken to be part of the FCM's off-duty period; and
- (c) if:
  - (i) only 1 commercial flight is conducted during the FDP; and
  - (ii) the private flight is conducted *after* the commercial flight; the private flight time must be taken to be part of the FCM's duty period and must not be taken to be part of the FCM's off-duty period; and
- (d) if:
  - (i) more than 1 commercial flight is conducted during the FDP; and
  - (ii) the private flight is conducted *after* the last commercial flight; the private flight time must be taken to be part of the FCM's duty period and must not be taken to be part of the FCM's off-duty period.

*Note* CAAP 48-01 provides examples of how to consider private flights within an FDP.

## **13 Operations under multiple Appendices**

13.1 If, under paragraph 10.1, 2 or more Appendices apply to a single FDP of an FCM, the following rules apply for an operation undertaken at any particular time in the FDP:

- (a) the maximum FDP that an AOC holder and an FCM must comply with is the FDP limit contained in the Appendix under which the operation is being conducted at that particular time;
- (b) the maximum flight time that an AOC holder and an FCM must comply with is the flight time limit contained in the Appendix under which the operation is being conducted at that particular time.

- 13.2 In determining the maximum FDP and flight time under paragraph 13.1, the limit determined from each Appendix must be based on the time of commencement of the FDP, and not on the time of commencement of operations under each Appendix.
- 13.3 At any particular time in an FDP, the AOC holder and FCM must each ensure that the FCM remains within the cumulative duty and cumulative flight time limits for the Appendix under which the operation is being conducted at that particular time.
- 13.4 Where operations under 2 or more Appendices are undertaken in a single FDP, the minimum off-duty period that the AOC holder and FCM must comply with following the FDP is that contained in the Appendix with the highest off-duty period as if the entire FDP was performed under that Appendix.
- 13.5 Subject to paragraph 13A.2, an AOC holder and an FCM must comply with the off-duty period requirements of the Appendix determined under paragraph 13.4 before the FCM commences another FDP.

### **13A Transitioning from Appendix 4B, 5 or 5A, or Subpart 137.Q of CASR**

- 13A.1 Subject to paragraph 13A.2, an FCM, transitioning from the application of Appendix 4B, 5 or 5A, or Subpart 137.Q of CASR to his or her last FDP or standby, to the application of another Appendix of this CAO (other than Appendix 4B, 5 or 5A) (the *other Appendix*) to his or her next FDP or standby, must before commencing the next FDP or standby under the other Appendix, have had at least 6 days off-duty in the previous 28 consecutive days.
- 13A.2 Subject to paragraph 13A.3, if, despite paragraph 13A.1, an FCM has not had the minimum number of days off-duty that are specified under the subsection for the transition to the other Appendix, the FCM may commence a first FDP or standby under the other Appendix provided that:
  - (a) the off-duty period immediately before the first FDP or standby under the other Appendix is at least 12 hours; and
  - (b) the report time for the FCM for the first FDP is not earlier than 0700 hours local time; and
  - (c) the FCM's previous FDP was less than 8 hours; and
  - (d) the first FDP is less than 8 hours in duration; and
  - (e) after the first FDP, there is only 1 subsequent FDP, also of less than 8 hours, before the requirements of paragraph 13A.1 must be complied with.
- 13A.3 Paragraph 13A.2 does not apply to a transition to Appendix 1.

## **14 AOC holder obligations**

### **Fitness for duty**

- 14.1 An AOC holder must not assign a duty on a flight to an FCM if the AOC holder reasonably believes that the FCM is unfit to perform the duty because of fatigue.

### **Limits**

- 14.2 The limits and requirements that are to apply to an FCM must be determined in accordance with the Appendix chosen under this CAO to apply to the FCM.

*Note* The word “limit” in a provision refers expressly or impliedly to a quantity of time and, depending on the context and other language of the provision, is used to denote a maximum quantity of time that is not to be exceeded except in accordance with this CAO, or a minimum quantity of time that is not to be reduced except in accordance with this CAO.

## Operations manual

- 14.3 The AOC holder must include in the operations manual:
- (a) the limits arising from compliance with each applicable Appendix of this CAO that the holder has chosen to apply to an FCM, showing:
    - (i) each maximum limit under the Appendix which must not be exceeded; and
    - (ii) each minimum limit under the Appendix which must not be reduced; and

*Note 1* For example, taking into account the provisions of an applicable Appendix, an FDP *limit* must not be exceeded, and an *off-duty period* must not be reduced.

*Note 2* An AOC holder with an FRMS implementation approval must include relevant limits in the operations manual (see subclauses 2.5 and 3.2 in Appendix 7).
  - (b) for FCMs conducting a particular operation — each limit mentioned in subparagraph (a) as modified by the AOC holder for the FCMs and the operation, but not so as to exceed a maximum limit, or reduce a minimum limit, set out in the applicable Appendix; and
  - (c) where the need to take account of possible hazards arises under subsection 15 — for FCMs conducting a particular operation, each limit mentioned in subparagraph (b) as modified by taking the possible hazard into account.

## Employee responsibilities

- 14.4 An AOC holder must set out in the operations manual its employees' responsibilities for operational fatigue management, and fatigue risk management.

## Meals

- 14.5 Except for operations under Appendix 7 — Fatigue Risk Management System (FRMS), where an FCM's FDP is to exceed 5 hours, the AOC holder must provide the opportunity for the FCM to have access to adequate sustenance (a *meal*) during the first 5 hours and periodically after that meal, so that not more than 5 hours elapse between each meal.

*Note* For operations under Appendix 7, it is expected that the FRMS would provide the opportunity for FCMs to have access to adequate sustenance at appropriate intervals.

## Records and reports

- 14.6 An AOC holder must maintain records (including relevant reports and documents) of the following:
- (a) FCM rosters;
  - (b) actual duty periods;
  - (c) actual flight times of each FCM when acting in the capacity of a crew member;

*Note* Thus, the flight time record does not include time spent positioning.
  - (d) actual split-duty rest periods, standby periods and off-duty periods;
  - (e) any FDP that was extended under the relevant provision (if any) of the Appendix or FRMS which the AOC holder has chosen to comply with, including information about the extensions in such detail as enables the holder to comply with subparagraph 14.8 (a).

*Note* A record under subparagraph 14.6 (e) is not required where an FDP is reassigned under the relevant provision of the Appendix, unless the reassignment results in an FDP that exceeds the relevant limit set out in the AOC holder's operations manual.

- 14.7 Each record mentioned in paragraph 14.6, including copies of reports and documents, must be securely retained for at least 5 years from the date the record and copy were made.
- 14.8 Each record concerning an extension of an FDP or a flight time limit mentioned in subparagraph 14.6 (e) must be:
- (a) studied and used by the AOC holder to provide for continuous improvement of the holder's fatigue management, and fatigue risk management policies; and
  - (b) promptly given to CASA, if so requested in writing.

#### Home base

- 14.9 Subject to paragraph 14.10, an AOC holder must:
- (a) determine the home base for each FCM (a **home base determination**); and
  - (b) inform each FCM of his or her home base determination; and
  - (c) set out in its operations manual procedures for making a home base determination which ensure that each determination, and any changes to it, do not adversely affect aviation safety.

*Note* A determination of home base should be assigned with a degree of permanence.

- 14.10 Paragraph 14.9 does not apply for an AOC holder in relation to an FCM who only conducts operations for which the limitations and requirements are those set out in Appendix 5 or Appendix 5A.

#### Rosters

- 14.11 An AOC holder must publish each roster so far in advance of the FDPs and standby periods listed in it as to provide the FCM to whom it applies with a reasonable opportunity to plan adequate rest before his or her duty.

*Note* Guidance for AOC holders with regards to their obligations is contained in CAAP 48-01.

### **15 Enhanced fatigue management obligations**

- 15.1 This subsection applies to an AOC holder to whom 1 or more of Appendices 2, 3, 4, 4A, 4B, 5, 5A and 6 of this CAO applies in accordance with subsection 10.

#### Operations manual procedures for hazards, multiple Appendices etc.

- 15.2 The AOC holder must set out the following in the operations manual:
- (a) procedures for identifying any reasonably foreseeable hazard that may compromise an FCM's alertness during an FDP;
  - (b) procedures for determining the limits and requirements mentioned in subparagraph 14.3 (c) which take into account the identified hazards;
  - (c) procedures for the continuous monitoring and evaluation of the AOC holder's policies, limits, practices and relevant organisational experiences, taking into account the hazards identified by the procedures mentioned in subparagraph (a), with a view to continuous improvement of fatigue management, and fatigue risk management;
  - (d) where the AOC holder undertakes operations under multiple Appendices — procedures to ensure that transitions between the different limits of the Appendices:
    - (i) are undertaken in accordance with subsections 13 and 13A; and
    - (ii) do not adversely affect aviation safety;

- (e) details of the training and assessment required by paragraph 15.3.

*Note* The procedures mentioned in this paragraph may be met, at least in part, by existing procedures such as those for an SMS.

## Training

- 15.3 Subject to subsection 15A, the AOC holder must, as a minimum:
- (a) make available, and require each FCM to undertake, initial and recurrent fatigue-related risk training relevant to the FCM's duties in operations under the AOC; and
  - (b) at the end of the initial training, and at the end of each occasion of recurrent training — assess the FCM's knowledge and learning from the training.
- Note* The training required by this paragraph may be incorporated into existing training programs such as an AOC holder's human factors and non-technical skills training program.
- 15.4 Initial training under paragraph 15.3:
- (a) for an FCM who becomes an AOC holder's employee after this CAO takes effect for the holder — must occur within 6 months of the person commencing the employment; and
  - (b) for an FCM who was the AOC holder's employee on the date this CAO takes effect for the holder — must occur within 6 months of the CAO taking effect.
- 15.5 Initial training under paragraph 15.3 must:
- (a) be in accordance with a syllabus; and
  - (b) deliver a thorough knowledge and understanding of the following:
    - (i) fatigue causes;
    - (ii) fatigue-related impairment;
    - (iii) the management of risks associated with fatigue;
    - (iv) the AOC holder's fatigue risk management obligations and procedures under the operations manual and this CAO; and
  - (c) equip each FCM with the ability to comply with his or her obligations under this CAO in operations for the AOC holder.
- 15.6 Recurrent training must occur at appropriate intervals and:
- (a) be in accordance with a syllabus; and
  - (b) revise the knowledge and understanding acquired under paragraph 15.5; and
  - (c) deliver a thorough knowledge and understanding of any changes in the AOC holder's operating practices, or fatigue risk management obligations and procedures, that have occurred since initial training or the preceding recurrent training (as the case may be).
- 15.7 Subject to subsection 15A, an FCM must:
- (a) attend the initial and each recurrent training mentioned in paragraph 15.3; and
  - (b) at the end of each training, successfully complete an assessment of learning from the training; and
  - (c) satisfy the AOC holder that he or she has sufficient knowledge of, and competence in managing, the fatigue-related risks relevant to his or her duties as an FCM.
- 15.8 The AOC holder must maintain for each FCM records of training and assessment completed under this subsection.

- 15.9 Each record mentioned in paragraph 15.8 must be securely retained from the date the record was made until at least 12 months after the FCM ceases to be employed by the AOC holder.

*Note* Guidance for AOC holders on these additional obligations is contained in CAAP 48-01.

## 15A Recognition of prior initial training

- 15A.1 In this subsection:

**agent** means an organisation contracted by an AOC holder to provide initial training to its FCMs.

**currency time** means the period of time that is the appropriate interval at which an AOC holder requires recurrent training to occur under paragraph 15.6.

*Note* For example, the interval may be every 18 months, or every 24 months. Further guidance is provided in CAAP 48-01.

**initial training** means fatigue-related risk training relevant to a person's duties as an FCM.

**registered training organisation** has the same meaning as in the Dictionary in CASR.

*Note* **Registered training organisation** means a training organisation listed on the National Register as a registered training organisation.

- 15A.2 This subsection applies to an AOC holder (the **current AOC holder**) for an FCM (a **new FCM**) who becomes a new employee of the current AOC holder.
- 15A.3 Subject to paragraph 15A.4, the references to initial training in paragraphs 15.3 and 15.7 do not apply to the current AOC holder for a new FCM who has successfully completed initial training (the **prior initial training**) with:
- (a) a different AOC holder or its agent; or
  - (b) the current AOC holder or its agent when previously employed by the current AOC holder; or
  - (c) a registered training organisation capable of delivering initial training.
- 15A.4 Paragraph 15A.3 does not apply unless:
- (a) the prior initial training was completed within the currency time immediately before the new FCM becomes employed by the current AOC holder; and
  - (b) the current AOC holder is satisfied that:
    - (i) the prior initial training complied with the requirements of subparagraph 15.5 (a) and sub-subparagraphs 15.5 (b) (i) to (iii); and
    - (ii) the new FCM complied with the requirements of paragraph 15.7 for the prior initial training; and
  - (c) the satisfaction mentioned in subparagraph (b) is based on authentic records proving the matters mentioned in sub-subparagraphs (b) (i) and (ii); and
  - (d) within 4 weeks of the new FCM being employed by the current AOC holder — the new FCM has successfully completed an induction course to inform him or her of any fatigue-related risks and information specific to the current AOC holder; and
  - (e) the records mentioned in subparagraph (c), and details of the induction course mentioned in subparagraph (d), are:
    - (i) included with the new FCM records mentioned in paragraph 15.8; and
    - (ii) retained for at least the period mentioned in paragraph 15.9.

## **16 Flight crew member obligations**

- 16.1 For subregulation 11.068 (1) of CASR, it is a condition on each flight crew licence that the licence holder must not begin to carry out any task for a flight if, due to fatigue, the FCM is, or is likely to be, unfit to perform a task that the FCM must perform during the flight.

*Note* Guidance for FCMs on this obligation is contained in CAAP 48-01.

- 16.2 The condition in paragraph 16.1 applies to an FCM regardless of whether the flight is conducted on behalf of an AOC holder or a Part 141 operator, or as a private operation.

*Note* An FCM employed by an AOC holder must not exceed any limit specified for the FCM in the AOC holder's operations manual, except where an extension is permitted.

## APPENDIX 1 BASIC LIMITS

### 1 Sleep opportunity before an FDP

- 1.1 An FCM must not be assigned or commence an FDP commencing away from home base unless, within the 10 hours immediately before commencing the FDP, he or she has at least 8 consecutive hours' sleep opportunity.
- 1.2 An FCM must not be assigned or commence an FDP commencing at home base unless, within the 12 hours immediately before commencing the FDP, he or she has at least 8 consecutive hours' sleep opportunity.

*Note* See subsection 6 of this CAO for the definition of *sleep opportunity* where it is defined as occurring during an off-duty period.

### 2 FDP and flight time limits

- 2.1 An FCM may only be assigned an FDP that is between the following times:
  - (a) the earlier of the following:
    - (i) the beginning of morning civil twilight on a day;
    - (ii) 0700 hours local time on the day;
  - (b) 0100 hours (local time at the location where the FDP commenced) on the following day.
- 2.2 Subject to subclauses 2.1, 2.3 and 2.4, an FCM may be assigned an FDP that is not longer than 9 hours.
- 2.3 If an FCM is assigned an FDP that is to commence before 0600 hours local time, being after the beginning of morning civil twilight — the assigned FDP must not be longer than 8 hours.
- 2.4 If an FCM is assigned an FDP that is to commence at or after 1400 hours local time — the assigned FDP must not be longer than 8 hours.

*Note* If an FDP commences *after* 1700 hours on a day, the FDP must be *less* than 8 hours because, under paragraph 2.1 (b), an FDP must not end later than 0100 hours on the following day (all times being local time at the commencing location).
- 2.5 An FCM may be assigned an FDP that finishes after 2200 hours local time (a *late FDP*) only if not more than 3 late FDPs are assigned to the FCM in any 168 consecutive hours.
- 2.6 An FCM must not be assigned or commence flight time for flight training during an FDP unless the flight training is conducted during the first 7 hours of the FDP's flight time.
- 2.7 An FCM must not exceed the flight time limit, or an FDP limit mentioned in subclause 2.2, 2.3 or 2.4, except in accordance with clause 3.

### 3 Extensions

- 3.1 An FDP limit mentioned in clause 2 may be extended by up to 1 hour if:
  - (a) the FDP has commenced; and
  - (b) unforeseen operational circumstances arise; and
  - (c) an extension of the FDP is operationally necessary to complete the duty; and
  - (d) the FCM considers himself or herself fit for the extension.

*Note 1* Under regulation 224 of CAR, the pilot in command of an aircraft is responsible for the conduct and safety of members of the crew on the aircraft and, therefore, has discretion not to permit an extension.

*Note 2* Guidance on the assessment of individual cognitive and physical fitness is contained in CAAP 48-01.

- 3.2 Flight training for up to 30 minutes may be conducted after the first 7 hours of the FDP's flight time if:
- (a) unforeseen operational circumstances arise after the commencement of the FDP; and
  - (b) it is operationally necessary in order to complete the duty; and
  - (c) the FCM considers himself or herself fit for the extension.
- 3.3 An FDP limit must not be extended under this clause if it would cause an FCM to exceed the cumulative flight time limits in clause 5.
- 3.4 Despite any limit or number under this Appendix, if:
- (a) unforeseen operational circumstances arise after take-off on the final sector of an FDP; and
  - (b) the unforeseen operational circumstances would cause an FCM to exceed any limit or number permitted under this Appendix;
- then, the flight may continue to the planned destination at the discretion of the pilot in command.

#### **4 Off-duty period limits**

- 4.1 An FCM must have a minimum off-duty period of at least 12 consecutive hours during any consecutive 24-hour period.
- 4.2 Before beginning an FDP, an FCM must have had:
- (a) at least 36 consecutive hours off-duty, including 2 local nights, in the 168 hours before the projected end time of the assigned FDP; and
  - (b) at least 6 days off-duty in the 28 consecutive days before the FDP commences.
- 4.3 If an FDP under this Appendix is followed by an FDP under another Appendix, then, despite anything in the other Appendix, the FCM must have a minimum off-duty period of at least 12 consecutive hours before commencing the FDP under the other Appendix.

#### **5 Limit on cumulative flight time**

- 5.1 The cumulative flight time accrued by an FCM during any consecutive 28-day period must not exceed 100 hours.
- 5.2 The cumulative flight time accrued by an FCM during any consecutive 365-day period must not exceed 1 000 hours.

## APPENDIX 2 MULTI-PILOT OPERATIONS EXCEPT FLIGHT TRAINING

### 1 Sleep opportunity before an FDP or standby

- 1.1 An FCM must not be assigned or commence an FDP or standby commencing away from home base unless he or she has at least 8 consecutive hours' sleep opportunity within the 10 hours immediately before:
- (a) if the commencement of the FDP has not been delayed — commencing the FDP; or
  - (b) subject to paragraph (c), if the commencement of the FDP has been delayed — the original reporting time for the FDP; or
  - (c) if the commencement of the FDP has been delayed by a single delay of 10 hours or more — commencing the FDP following the delay; or
  - (d) for a standby — commencing the standby.
- 1.2 An FCM must not be assigned or commence an FDP or standby commencing at home base unless he or she has at least 8 consecutive hours' sleep opportunity within the 12 hours immediately before:
- (a) if the commencement of the FDP has not been delayed — commencing the FDP; or
  - (b) subject to paragraph (c), if the commencement of the FDP has been delayed — the original reporting time for the FDP; or
  - (c) if the commencement of the FDP has been delayed by a single delay of 10 hours or more — commencing the FDP following the delay; or
  - (d) for a standby — commencing the standby.

*Note* See subsection 6 of this CAO for the definition of *sleep opportunity*, where it is defined as occurring during an off-duty period.

### 2 Limits for an acclimatised FCM

- 2.1 Subject to clause 5, an acclimatised FCM must not be assigned an FDP longer than the number of hours specified in Table 2.1 in this clause (the **FDP limit**), as determined by the acclimatised time at the start of the FDP and the number of sectors to be flown.
- 2.2 An acclimatised FCM must not be assigned flight time longer than 10.5 hours except in an augmented crew operation.
- Note* There is no flight time limit for an augmented crew operation.
- 2.3 In applying Table 2.1, first, choose the appropriate acclimatised time at which the FDP for the FCM is to start, then choose the number of sectors which are to be flown. The maximum FDP for the acclimatised FCM is the number under the chosen number of sectors that corresponds to the chosen acclimatised time at which the FDP for the FCM is to start.

**Table 2.1 Maximum FDP (in hours) for an acclimatised FCM according to number of sectors and acclimatised time at the start of the FDP**

Acclimatised time at start of FDP	Maximum FDP hours according to sectors to be flown					
	1-3	4	5	6	7	8+
<b>0000-0459</b>	10	9.5	9	8.5	8	7.5
<b>0500-0559</b>	11	10.5	10	9.5	9	8.5
<b>0600-0659</b>	12	11.5	11	10.5	10	9.5
<b>0700-1259</b>	13	12.5	12	11.5	11	10.5
<b>1300-1359</b>	12	11.5	11	10.5	10	9.5
<b>1400-1459</b>	11	10.5	10	9.5	9	8.5
<b>1500-2359</b>	10	9.5	9	8.5	8	7.5

*Note* To determine an FCM's acclimatised time, refer to subsection 7 at the beginning of this CAO.

### **3 Limits for an FCM in an unknown state of acclimatisation**

3.1 Subject to clause 5, an FCM in an unknown state of acclimatisation must not be assigned an FDP longer than the number of hours specified in Table 3.1 in this clause, as determined by duration of the off-duty period immediately before the FDP and the number of sectors to be flown.

3.2 An FCM in an unknown state of acclimatisation must not be assigned flight time longer than 10.5 hours except in an augmented crew operation.

*Note* There is no flight time limit for an augmented crew operation.

3.3 In applying Table 3.1, first, choose the appropriate duration of off-duty period before the FDP for the FCM, then choose the number of sectors which are to be flown. The maximum FDP for the appropriate off-duty period for the FCM is the number under the chosen number of sectors that corresponds to the chosen off-duty period.

**Table 3.1 Maximum FDP for an FCM in an unknown state of acclimatisation according to number of sectors and duration of the off-duty period immediately before the FDP**

Duration of off-duty period immediately before the FDP	Maximum FDP hours according to sectors to be flown					
	1-3	4	5	6	7	8+
<b>Less than 30 hours</b>	10	9.5	9	8.5	8	7.5
<b>30 hours or more</b>	12	11.5	11	10.5	10	9.5

3.4 An FCM may only be assigned 4 consecutive FDPs in an unknown state of acclimatisation after which the FCM must have an adaptation period sufficient to become reacclimatised in accordance with paragraph 7.4 at the beginning of this CAO.

### **4 Increase in FDP limits by split duty**

4.1 Subject to subclause 4.4, where an FDP contains a split-duty rest period of at least 4 consecutive hours with access to suitable sleeping accommodation, the

- maximum FDP worked out under clause 2 or 3 may be increased by up to 4 hours, provided the new maximum under clause 2 or 3 does not then exceed 16 hours.
- 4.2 After an FDP mentioned in subclause 4.1, the first 4 hours of the split-duty rest period may be reduced by 2 hours in determining the subsequent off-duty period or cumulative duty time under clause 10 or 12 of this Appendix.
  - 4.3 Subject to subclause 4.4, where an FDP contains a split-duty rest period of at least 2 consecutive hours with access to suitable resting accommodation, the FDP limits under subclause 2.1 or 3.1 may be increased by half the duration of the split-duty rest period, provided the increase is not more than 2 hours.
  - 4.4 If a split-duty rest period includes any period between the hours of 2300 to 0529:
    - (a) acclimatised time; or
    - (b) if the FCM is in an unknown state of acclimatisation — local time;then:
    - (c) the split-duty rest period must be for a consecutive period of at least 7 hours with access to suitable sleeping accommodation; and
    - (d) the maximum FDP may be increased to 16 hours (if not already permitted); and
    - (e) the reduction in the subsequent off-duty period and cumulative duty time, provided for in subclause 4.2, does not apply.
  - 4.5 Any remaining portion of an FDP following a split-duty rest period must be no longer than 6 hours.

## **5 Increase in FDP and flight time limits in an augmented crew operation**

- 5.1 An acclimatised FCM in an augmented crew operation may be assigned an FDP that is no longer than the number of hours specified in Table 5.1 in this clause, as determined by the acclimatised time at the start of the FDP, the class of crew rest facility available, and the number of additional FCMs — but only if the conditions in subclause 5.3 are met.
- 5.2 An FCM in an unknown state of acclimatisation in an augmented crew operation may be assigned an FDP that is no longer than the number of hours specified in Table 5.2 in this clause, as determined by the duration of the off-duty period immediately before the FDP, the class of crew rest facility available, and the number of additional FCMs — but only if the conditions in subclause 5.3 are met.
- 5.3 For subclauses 5.1 and 5.2, the conditions are as follows:
  - (a) the AOC holder's operations manual must have procedures for augmented crew operations;
  - (b) the FCMs at the end of the FDP for the augmented crew operation must be the same as the FCMs who commenced the first sector of the FDP;  
*Note* For safety reasons, this is a critical condition. If, for example, a medical emergency required the disembarkation of an FCM during the FDP, for the flight to continue all of the FCMs must be replaced with a new augmented crew commencing a new FDP.
  - (c) the FDP must be limited to not more than 3 sectors;
  - (d) the minimum in-flight rest during the FDP must be:
    - (i) for each FCM who will not be at the aircraft controls during the final landing — 1.5 consecutive hours; and
    - (ii) for each FCM who will be at the aircraft controls during the final landing — 2 consecutive hours;
  - (e) the in-flight rest must be planned for the cruise phase of the flight;

- (f) if an assigned FDP is to exceed 14 hours, then:
  - (i) not more than 2 sectors may be assigned; and
  - (ii) where 2 sectors are assigned, either:
    - (A) each FCM who will be at the aircraft controls during the landing at the end of the second sector must have had an in-flight rest period of at least 2 consecutive hours within the 8-hour period that ends at the scheduled time of the landing; or
    - (B) the scheduled flight time of the second sector must be at least 9 hours;
- (g) if an assigned FDP is to exceed 16 hours, then:
  - (i) only 1 sector may be assigned; and
  - (ii) the minimum in-flight rest during the FDP must be:
    - (A) for each FCM who will not be at the aircraft controls during the final landing — 2 consecutive hours; and
    - (B) for each FCM who will be at the aircraft controls during the final landing — 3 consecutive hours.

*Note* The minimum in-flight rest specified may not provide adequate rest to ensure alertness for the remainder of the FDP. Guidance on the use of in-flight rest is contained in CAAP 48-01.

5.4 To apply Table 5.1 for an FCM who is acclimatised, first, choose the appropriate acclimatised time at which his or her FDP is to start, then choose the class of crew rest facility available and within the class choose the number of additional FCMs. The maximum FDP for the acclimatised FCM is the number under the chosen number of additional FCMs under the chosen class that corresponds to the acclimatised time at which the FDP for the FCM is to start.

**Table 5.1 Maximum FDP (in hours) for an acclimatised FCM in an augmented crew operation according to class of crew rest facility, number of additional FCMs and acclimatised time at the start of the FDP**

Acclimatised time at start of FDP	Maximum FDP according to class of crew rest facility and number of additional FCMs					
	Class 1		Class 2		Class 3	
	1	2	1	2	1	2
<b>0700-1059</b>	16	18	15	16.5	14	15
<b>1100-1559</b>	16	18	15	16.5	13	14
<b>1600-0459</b>	16	18	15	16.5	12	13
<b>0500-0659</b>	16	18	15	16.5	13	14

*Note* To determine an FCM’s acclimatised time, refer to subsection 7 at the beginning of this CAO.

5.5 To apply Table 5.2 to an FCM who is in an unknown state of acclimatisation, first, choose the appropriate off-duty period that is immediately before his or her FDP, then choose the class of crew rest facility available and within the class choose the number of additional FCMs. The maximum FDP for the FCM is the number under the chosen number of additional FCMs under the chosen class that corresponds to the off-duty period.

**Table 5.2 Maximum FDP (in hours) for an FCM in an unknown state of acclimatisation in an augmented operation according to class of crew rest facility, number of additional FCMs and duration of off-duty period immediately before the FDP**

Duration of off-duty period immediately before the FDP	Maximum FDP according to class of crew rest facility and number of additional FCMs					
	Class 1		Class 2		Class 3	
<i>Additional FCMs</i>	1	2	1	2	1	2
<b>Less than 30 hours</b>	16	18	15	16.5	12	13
<b>30 hours or more</b>	16	18	15	16.5	14	15

*Note* These are the maximum FDP and flight time limits under this Appendix unless, for any particular FCM, other provisions have the effect of reducing these limits (for example, subsections 14 and 15 of this CAO).

## 6 Delayed reporting time

### *Delays without operations manual procedures*

- 6.1 Subclauses 6.2 to 6.4 apply to an AOC holder if the operations manual does not have procedures for delays.
- 6.2 The AOC holder may:
- only delay an FCM's reporting time (the ***original reporting time***) if the FCM is first informed of the delay at least 10 hours before the reporting time; and
  - if paragraph (a) applies — consider the period between the original reporting time and the new reporting time (the ***period of the delay***) to be an off-duty period; and
  - if paragraph (b) applies — at the end of the off-duty period, assign an FDP to the FCM subject to the applicable limits set out in this Appendix or another Appendix of this CAO.
- 6.3 If the AOC holder:
- delays the FCM's original reporting time; and
  - does not inform the FCM of the delay at least 10 hours before the original reporting time;
- then the FCM's FDP is taken to commence at the original reporting time.
- 6.4 If subclause 6.3 applies, the off-duty period requirements of this Appendix apply to the FCM whether or not the flight occurs.

### *Delays under operations manual procedures*

- 6.5 Subclauses 6.6 to 6.13 apply to an AOC holder if the operations manual has procedures for 1 or more delays.
- 6.6 If an AOC holder's operations manual has procedures for delays, the AOC holder may delay an FCM's original reporting time if the AOC holder informs the FCM of the new reporting time as follows:
- if the FCM is at home base:
    - at least 2 hours before the original reporting time; and
    - at least 2 hours before each new reporting time; or

- (b) if the FCM is not at home base:
    - (i) at least 1 hour before the time the FCM would normally have had to leave his or her accommodation in order to report in a timely way for duty at the original reporting time; and
    - (ii) at least 1 hour before each new time the FCM would normally have had to leave his or her accommodation in order to report in a timely way for duty at the reporting time.
- 6.7 If an FCM is informed of a delay in accordance with subclause 6.6, the period between the original reporting time and the final new reporting time is deemed to be standby.
- Note* The period mentioned in subclause 6.7 is deemed to be standby whether or not subparagraph (b) of the definition of *standby* is met.
- 6.8 If an FCM is not informed of a delay in accordance with subclause 6.6, the FCM's FDP is taken to commence at whichever of the following is the later:
- (a) the original reporting time;
  - (b) the last new reporting time following a delay of which the FCM was informed in accordance with subclause 6.6.
- 6.9 If subclause 6.8 applies, the off-duty period requirements of this Appendix apply to the FCM whether or not the flight occurs.

***A single delay of at least 10 hours under operations manual procedures***

- 6.10 Despite subclause 6.7, if the period of any single delay to an FCM's FDP is at least 10 hours, the AOC holder may:
- (a) consider the period of the delay to be an off-duty period; and
  - (b) at the end of the off-duty period, assign an FDP to the FCM subject to the applicable limits set out in this Appendix or another Appendix of this CAO.

***Maximum FDP after delay under operations manual procedures***

- 6.11 Subject to subclause 6.13, if:
- (a) an FCM's FDP is delayed under subclause 6.6; and
  - (b) the FDP commences at a new reporting time that is within 4 hours of the original reporting time;
- then the maximum FDP must be based on whichever of the following is the more limiting in calculating the FDP:
- (c) the original reporting time;
  - (d) the new reporting time.
- 6.12 Subject to subclause 6.13, if:
- (a) the FCM's FDP is delayed under subclause 6.6; and
  - (b) the FDP commences at a new reporting time that is at least 4 hours after the original reporting time;
- then:
- (c) the FDP is taken to have commenced 4 hours after the original reporting time; and
  - (d) the maximum FDP must be based on whichever of the following is the more limiting in calculating the FDP:
    - (i) the original reporting time;

- (ii) the time at which the FDP is taken to have commenced in accordance with paragraph (c).
- 6.13 The combined duration of 1 or more delays and the immediately following FDP must not exceed 16 hours unless the FDP:
- (a) is an augmented crew operation;
  - (b) contains a split-duty rest period.

***Cancellations — with or without operations manual procedures for delays***

- 6.14 If:
- (a) an FCM's FDP is delayed under subclause 6.2 or 6.6; and
  - (b) the AOC holder informs the FCM that the flight will not occur (***cancellation***);
- then, the FCM must have an off-duty period of at least 10 consecutive hours, commencing from the time he or she is informed of the cancellation, before again being assigned an FDP in accordance with this Appendix or another Appendix of this CAO.

***Meaning of "informed"***

- 6.15 In this clause:
- informed*** means informed by the AOC holder in accordance with procedures in the holder's operations manual for communicating information between the holder and an FCM.

## **7 Reassignment and extension**

- 7.1 After an FCM's assigned FDP commences, the AOC holder may reassign to the FCM a modified FDP and number of sectors to be flown (***a reassignment***), provided that each of the following applies:
- (a) subject to subclause 7.3 — the modified FDP and flight time does not exceed the limits in the holder's operations manual for the new number of sectors;
  - (b) the FCM has confirmed that he or she is fit for the reassignment.
- Note* Fitness in this context is based on the FCM's self-assessment. An FCM has an obligation under paragraph 16.1 of this CAO not to carry out any task for a flight if, due to fatigue, the FCM is, or is likely to become, unfit for the task. If such circumstances apply, the FCM must decline the reassignment.
- 7.2 If subclause 7.1 applies, the FCM may continue in the modified FDP in accordance with subclause 7.1.
- 7.3 Despite the FDP limits provided in the operations manual, in unforeseen operational circumstances at the discretion of the pilot in command:
- (a) the FDP limits in the operations manual may be extended by up to:
    - (i) 1 hour; or
    - (ii) for an augmented crew operation under clause 5 — 2 hours; and
  - (b) the sectors for the FDP limits may be increased by 1 more than would otherwise be the case for the FDP.
- 7.4 Before exercising the discretion under subclause 7.3 to extend the FDP limit of an FCM, the pilot in command must:
- (a) do the following:
    - (i) consult each FCM who is a crew member on the aircraft;
    - (ii) be satisfied that each FCM considers himself or herself fit for the extension; and

- (b) if the FCM whose FDP would be extended is the pilot in command — do the following:
  - (i) consult each FCM who is a crew member on the aircraft;
  - (ii) be satisfied that, as pilot in command, he or she is fit for the extension.
- 7.5 Despite the limits provided in the operations manual, the flight time limit for an FDP may be extended by not more than 30 minutes if:
  - (a) it is operationally necessary in order to complete the duty;
  - (b) the FCM, or each FCM, considers himself or herself fit for the extension.
- 7.6 An FDP limit must not be reassigned or extended under this clause if it would cause an FCM to exceed the cumulative flight time limits in clause 11 or the cumulative duty time limits in clause 12.
- 7.7 Despite any limit or number under this Appendix, if:
  - (a) unforeseen operational circumstances arise after take-off on the final sector of an FDP; and
  - (b) the unforeseen operational circumstances would cause an FCM to exceed any limit or number permitted under this Appendix;
 then the flight may continue to the planned destination or alternate at the discretion of the pilot in command.

*Note 1* Under regulation 224 of CAR, the pilot in command of an aircraft is responsible for the conduct and safety of members of the crew on the aircraft and, therefore, has a discretion to not permit an extension to occur even if otherwise permissible under this clause.

*Note 2* Guidance on the assessment of individual cognitive and physical fitness is contained in CAAP 48-01.

## 8 Standby limits and standby-like arrangements

- 8.1 An AOC holder must not require an FCM to be on continuous standby for a period longer than 14 hours.
- 8.2 The maximum allowable FDP after a call out from standby must be decreased by the number of hours by which the standby exceeds 4 hours.
- 8.3 If an FCM is called out, the maximum combined duration of standby and the subsequent FDP is 16 hours, except where the subsequent FDP:
  - (a) is an augmented crew operation; or
  - (b) includes a split-duty rest period, in suitable sleeping accommodation, of at least 4 consecutive hours.
- 8.4 A standby which is completed without a call out must be followed by an off-duty period of at least 10 consecutive hours.
- 8.5 To remove any doubt, the period of time in which an FCM is held in a standby-like arrangement must be treated as a duty period for the purposes of this CAO.

*Note* For example, the period spent in a standby-like arrangement must be included as part of a following FDP assigned to the FCM or added to the preceding FDP when determining minimum off-duty periods under clause 10.

## 9 Positioning

On completion of assigned flight duties in an FDP (the *relevant FDP*), an FCM may position to a suitable location as required by the AOC holder.

*Note* As with any duty, the time spent in positioning after completion of the FDP must be added to the relevant FDP when determining minimum off-duty periods under clause 10.

## 10 Off-duty period limits

### *Off-duty period following an FDP*

- 10.1 If the sum of an FCM's FDP, and his or her duty time (if any) after completion of the FDP but before commencement of the following off-duty period, does not exceed 12 hours, his or her following off-duty period must be at least as follows:
- (a) if the FCM is acclimatised and undertaking the off-duty period away from home base — the sum of:
    - (i) 10 hours; and
    - (ii) the amount that the displacement time exceeds 3 hours if travelling west, or 2 hours if travelling east;
  - (b) if the FCM is acclimatised and undertaking the off-duty period at home base — the sum of:
    - (i) 12 hours; and
    - (ii) the amount that the displacement time exceeds 3 hours if travelling west, or 2 hours if travelling east;
  - (c) if the FCM is in an unknown state of acclimatisation — the sum of:
    - (i) 14 hours; and
    - (ii) the amount of the displacement time.
- 10.2 If the sum of an FCM's FDP, and his or her duty time (if any) after completion of the FDP but before commencement of the following off-duty period (***other duty time***), exceeds 12 hours, his or her following off-duty period must be at least as follows:
- (a) if the FCM is acclimatised — 12 hours, plus the sum of:
    - (i) 1.5 times the time that the FDP and the other duty time exceeded 12 hours; and
    - (ii) the amount that the displacement time exceeds 3 hours if travelling west, or 2 hours if travelling east;
  - (b) if the FCM is in an unknown state of acclimatisation — 14 hours, plus the sum of:
    - (i) 1.5 times the time that the FDP and the other duty time exceeded 12 hours; and
    - (ii) the amount of the displacement time.

### *Reduction in off-duty period*

- 10.3 Despite subclause 10.1, if the sum of an FCM's FDP (the ***last FDP***), and his or her duty time (if any) after completion of the FDP but before commencement of the following off-duty period, does not exceed 10 hours, his or her following off-duty period (***ODP 2***), may be reduced to not less than 9 hours provided that:
- (a) the off-duty period undertaken immediately before the last FDP was at least 12 hours, including a local night; and
  - (b) the FCM is acclimatised at the commencement of the ODP 2; and
  - (c) the ODP 2 is undertaken over a local night; and
  - (d) the ODP 2 is not undertaken at home base; and
  - (e) the off-duty period following the FDP after ODP 2 is at least 12 hours, including a local night.

- 10.4 Despite subclauses 10.1 and 10.2, if, after an FDP (the *first FDP*) but before the next FDP (the *second FDP*), the off-duty period calculated under this clause is more than 14 hours, the off-duty period may be reduced to not less than 14 hours, provided that:
- (a) the reduced off-duty period is undertaken away from home base; and
  - (b) the first FDP was not extended past the FDP limit as provided for under the AOC holder's operations manual; and
  - (c) the FCM commences the second FDP in an acclimatised state; and
  - (d) the off-duty period following the second FDP is of at least 36 consecutive hours and includes 2 local nights.

*Off-duty periods for cumulative fatigue recovery*

- 10.5 Before beginning an FDP or standby, an FCM must have had at least 36 consecutive hours off-duty, including 2 local nights, in the 168 hours before the projected end time of the assigned FDP or assigned standby.
- 10.6 Before beginning an FDP or standby, an FCM must have had at least 6 days off-duty in the 28 consecutive days before the standby or FDP commences.

**11 Limit on cumulative flight time**

- 11.1 The cumulative flight time accrued by an FCM during any consecutive 28-day period must not exceed 100 hours.
- 11.2 The cumulative flight time accrued by an FCM during any consecutive 365-day period must not exceed 1 000 hours.

**12 Limit on cumulative duty time**

- 12.1 The cumulative duty accrued by an FCM during any consecutive 168-hour period must not exceed 60 hours.
- 12.2 The cumulative duty accrued by an FCM during any consecutive 336-hour period must not exceed 100 hours.

*Note* 168 hours is the number of hours in a 7-day period, and 336 hours is the number of hours in a 14-day period.

**13 Limits on infringing the WOCL and early starts**

- 13.1 Subject to subclause 13.3, an FCM must not be assigned more than 3 consecutive early starts.
- 13.2 Subject to subclause 13.3, an FCM, whose duties have already infringed 3 consecutive WOCLs, must not be assigned an FDP that would again infringe the WOCL without at least an intervening off-duty period that includes a local night.
- Note* See paragraph 6.2 of this CAO for duties that infringe a WOCL.
- 13.3 Despite subclauses 13.1 and 13.2, the FCM may have a 4<sup>th</sup>, or a 4<sup>th</sup> and a 5<sup>th</sup>, consecutive early start (whether or not the start infringes the WOCL) if:
- (a) the maximum FDP permissible on the day of the 4<sup>th</sup> early start is reduced by 2 hours; and
  - (b) the maximum FDP permissible on the day of the 5<sup>th</sup> early start is reduced by 4 hours.

**14 Maximum durations must not be exceeded**

Unless an extension is permitted under clause 7, in performing duty an FCM must not exceed the following:

- (a) the maximum duration of the FDP specified for the FCM in the AOC holder's operations manual;
- (b) the maximum flight time specified for the FCM in the AOC holder's operations manual.

## APPENDIX 3      MULTI-PILOT OPERATIONS EXCEPT COMPLEX OPERATIONS AND FLIGHT TRAINING

*Note* Multi-pilot operations (other than flight training) that do not cross time zones, or involve augmented crew operations, may find Appendix 3 more suitable than Appendix 2 because it has the same limitations but is less complex.

### 1      **Sleep opportunity before an FDP or standby**

- 1.1 An FCM must not be assigned or commence an FDP or standby commencing away from home base unless he or she has at least 8 consecutive hours' sleep opportunity within the 10 hours immediately before:
  - (a) if the commencement of the FDP has not been delayed — commencing the FDP; or
  - (b) subject to paragraph (c), if the commencement of the FDP has been delayed — the original reporting time for the FDP; or
  - (c) if the commencement of the FDP has been delayed by a single delay of 10 hours or more — commencing the FDP following the delay; or
  - (d) for a standby — commencing the standby.
- 1.2 An FCM must not be assigned or commence an FDP or standby commencing at home base unless he or she has at least 8 consecutive hours' sleep opportunity within the 12 hours immediately before:
  - (a) if the commencement of the FDP has not been delayed — commencing the FDP; or
  - (b) subject to paragraph (c), if the commencement of the FDP has been delayed — the original reporting time for the FDP; or
  - (c) if the commencement of the FDP has been delayed by a single delay of 10 hours or more — commencing the FDP following the delay; or
  - (d) for a standby — commencing the standby.

*Note* See subsection 6 of this CAO for the definition of *sleep opportunity*, where it is defined as occurring during an off-duty period.

### 2      **FDP and flight time limits**

- 2.1 An FCM must not be assigned an FDP longer than the number of hours specified in Table 2.1 in this clause (the **FDP limit**), as determined by the local time at the start of the FDP and the number of sectors to be flown.
- 2.2 An FCM must not be assigned flight time longer than 10.5 hours.
- 2.3 In applying Table 2.1, first, choose the appropriate local time at which the FDP for the FCM is to start, then choose the number of sectors which are to be flown. The maximum FDP for the FCM is the number under the chosen number of sectors that corresponds to the chosen local time at which the FDP for the FCM is to start.

**Table 2.1 Maximum FDP (in hours) for an FCM according to number of sectors and local time at the start of the FDP**

Local time at start of FDP	Maximum FDP hours according to sectors to be flown					
	1-3	4	5	6	7	8+
<b>0000-0459</b>	10	9.5	9	8.5	8	7.5
<b>0500-0559</b>	11	10.5	10	9.5	9	8.5
<b>0600-0659</b>	12	11.5	11	10.5	10	9.5
<b>0700-1259</b>	13	12.5	12	11.5	11	10.5
<b>1300-1359</b>	12	11.5	11	10.5	10	9.5
<b>1400-1459</b>	11	10.5	10	9.5	9	8.5
<b>1500-2359</b>	10	9.5	9	8.5	8	7.5

### **3 Increase in FDP limits by split duty**

- 3.1 Subject to subclause 3.4, where an FDP contains a split-duty rest period of at least 4 consecutive hours with access to suitable sleeping accommodation, the maximum FDP worked out under clause 2 may be increased by up to 4 hours, provided the new maximum under clause 2 does not then exceed 16 hours.
- 3.2 After an FDP mentioned in subclause 3.1, the first 4 hours of the split-duty rest period may be reduced by 2 hours in determining the subsequent off-duty period or cumulative duty time under clause 8 or 10 of this Appendix.
- 3.3 Subject to subclause 3.4, where an FDP contains a split-duty rest period of at least 2 consecutive hours with access to suitable resting accommodation, the FDP limits under subclause 2.1 may be increased by half the duration of the split-duty rest period, provided the increase is not more than 2 hours.
- 3.4 If a split-duty rest period includes any period between the hours of 2300 to 0529 local time, then:
  - (a) the split-duty rest period must be for a consecutive period of at least 7 hours with access to suitable sleeping accommodation; and
  - (b) the maximum FDP may be increased to 16 hours (if not already permitted); and
  - (c) the reduction in the subsequent off-duty period and cumulative duty time, provided for in subclause 3.2, does not apply.
- 3.5 Any remaining portion of an FDP following a split-duty rest period must be no longer than 6 hours.

### **4 Delayed reporting time**

#### *Delays without operations manual procedures*

- 4.1 Subclauses 4.2 to 4.4 apply to an AOC holder if the operations manual does not have procedures for delays.
- 4.2 The AOC holder may:
  - (a) only delay an FCM's reporting time (the ***original reporting time***) if the FCM is first informed of the delay at least 10 hours before the reporting time; and

- (b) if paragraph (a) applies — consider the period between the original reporting time and the new reporting time (the *period of the delay*) to be an off-duty period; and
  - (c) if paragraph (b) applies — at the end of the off-duty period, assign an FDP to the FCM subject to the applicable limits set out in this Appendix or another Appendix of this CAO.
- 4.3 If the AOC holder:
- (a) delays the FCM’s original reporting time; and
  - (b) does not inform the FCM of the delay at least 10 hours before the original reporting time;
- then, the FCM’s FDP is taken to commence at the original reporting time.
- 4.4 If subclause 4.3 applies, the off-duty period requirements of this Appendix apply to the FCM whether or not the flight occurs.

***Delays under operations manual procedures***

- 4.5 Subclauses 4.6 to 4.13 apply to an AOC holder if the operations manual has procedures for 1 or more delays.
- 4.6 If an AOC holder’s operations manual has procedures for delays, the AOC holder may delay an FCM’s original reporting time if the AOC holder informs the FCM of the new reporting time as follows:
- (a) if the FCM is at home base:
    - (i) at least 2 hours before the original reporting time; and
    - (ii) at least 2 hours before each new reporting time;
  - (b) if the FCM is not at home base:
    - (i) at least 1 hour before the time the FCM would normally have had to leave his or her accommodation in order to report in a timely way for duty at the original reporting time; and
    - (ii) at least 1 hour before each new time the FCM would normally have had to leave his or her accommodation in order to report in a timely way for duty at the reporting time.
- 4.7 If an FCM is informed of a delay in accordance with subclause 4.6, the period between the original reporting time and the final new reporting time is deemed to be standby.

*Note* The period mentioned in subclause 4.7 is deemed to be standby whether or not paragraph (b) of the definition of *standby* is met.

- 4.8 If an FCM is not informed of a delay in accordance with subclause 4.6, the FCM’s FDP is taken to commence at whichever of the following is the later:
- (a) the original reporting time;
  - (b) the last new reporting time following a delay of which the FCM was informed in accordance with subclause 4.6.
- 4.9 If subclause 4.8 applies, the off-duty period requirements of this Appendix apply to the FCM whether or not the flight occurs.

***A single delay of at least 10 hours under operations manual procedures***

- 4.10 Despite subclause 4.7, if the period of any single delay to an FCM’s FDP is at least 10 hours, the AOC holder may:
- (a) consider the period of the delay to be an off-duty period; and

- (b) at the end of the off-duty period, assign an FDP to the FCM subject to the applicable limits set out in this Appendix or another Appendix of this CAO.

***Maximum FDP after delay under operations manual procedures***

4.11 Subject to subclause 4.13, if:

- (a) an FCM's FDP is delayed under subclause 4.6; and
- (b) the FDP commences at a new reporting time that is within 4 hours of the original reporting time;

then the maximum FDP must be based on whichever of the following is the more limiting in calculating the FDP:

- (c) the original reporting time;
- (d) the new reporting time.

4.12 Subject to subclause 4.13, if:

- (a) the FCM's FDP is delayed under subclause 4.6; and
- (b) the FDP commences at a new reporting time that is at least 4 hours after the original reporting time;

then:

- (c) the FDP is taken to have commenced 4 hours after the original reporting time; and
- (d) the maximum FDP must be based on whichever of the following is the more limiting in calculating the FDP:
  - (i) the original reporting time;
  - (ii) the time at which the FDP is taken to have commenced in accordance with paragraph (c).

4.13 The combined duration of 1 or more delays and the immediately following FDP must not exceed 16 hours unless the FDP contains a split-duty rest period.

***Cancellations — with or without operations manual procedures for delays***

4.14 If:

- (a) an FCM's FDP is delayed under subclause 4.2 or 4.6; and
- (b) the AOC holder informs the FCM that the flight will not occur (***cancellation***);

then the FCM must have an off-duty period of at least 10 consecutive hours, commencing from the time he or she is informed of the cancellation, before again being assigned an FDP in accordance with this Appendix or another Appendix of this CAO.

***Meaning of "informed"***

4.15 In this clause:

***informed*** means informed by the AOC holder in accordance with procedures in the holder's operations manual for communicating information between the holder and an FCM.

## 5 Reassignment and extension

- 5.1 After an FCM's assigned FDP commences, the AOC holder may reassign to the FCM a modified FDP and number of sectors to be flown (a *reassignment*), provided that each of the following applies:
- (a) subject to subclause 5.3 — the modified FDP does not exceed the limits in the holder's operations manual for the new number of sectors;
  - (b) the FCM has confirmed that he or she is fit for the reassignment.
- Note* Fitness in this context is based on the FCM's self-assessment. An FCM has an obligation under paragraph 16.1 of this CAO not to carry out any task for a flight if, due to fatigue, the FCM is, or is likely to become, unfit for the task. If such circumstances apply, the FCM must decline the reassignment.
- 5.2 If subclause 5.1 applies, the FCM may continue in the modified FDP in accordance with subclause 5.1.
- 5.3 Despite the FDP limits provided in the operations manual, in unforeseen operational circumstances at the discretion of the pilot in command:
- (a) the FDP limits in the operations manual may be extended by up to 1 hour; and
  - (b) the sectors for the FDP limits may be increased by 1 more than would otherwise be the case for the FDP.
- 5.4 Before exercising the discretion under subclause 5.3 to extend the FDP limit of an FCM, the pilot in command must:
- (a) do the following:
    - (i) consult each FCM who is a crew member on the aircraft;
    - (ii) be satisfied that each FCM considers himself or herself fit for the extension; and
  - (b) if the FCM whose FDP would be extended is the pilot in command — do the following:
    - (i) consult each FCM who is a crew member on the aircraft;
    - (ii) be satisfied that, as pilot in command, he or she is fit for the extension.
- 5.5 Despite the limits provided in the operations manual, the flight time limit for an FDP may be extended by not more than 30 minutes if:
- (a) it is operationally necessary in order to complete the duty; and
  - (b) the FCM, or each FCM, considers himself or herself fit for the extension.
- 5.6 An FDP limit must not be reassigned or extended under this clause if it would cause an FCM to exceed the cumulative flight time limits in clause 9 or the cumulative duty time limits in clause 10.
- 5.7 Despite any limit or number under this Appendix, if:
- (a) unforeseen operational circumstances arise after take-off on the final sector of an FDP; and
  - (b) the unforeseen operational circumstances would cause an FCM to exceed any limit or number permitted under this Appendix;
- then the flight may continue to the planned destination or alternate at the discretion of the pilot in command.

*Note 1* Under regulation 224 of CAR, the pilot in command of an aircraft is responsible for the conduct and safety of members of the crew on the aircraft and, therefore, has a discretion to not permit an extension to occur even if otherwise permissible under this clause.

*Note 2* Guidance on the assessment of individual cognitive and physical fitness is contained in CAAP 48-01.

## 6 Standby limits and standby-like arrangements

- 6.1 An AOC holder must not require an FCM to be on continuous standby for a period longer than 14 hours.
- 6.2 The maximum allowable FDP after a call out from standby must be decreased by the number of hours by which the standby exceeds 4 hours.
- 6.3 If an FCM is called out, the maximum combined duration of standby and the subsequent FDP is 16 hours except where the subsequent FDP includes a split-duty rest period, in suitable sleeping accommodation, of at least 4 consecutive hours.
- 6.4 A standby which is completed without a call out must be followed by an off-duty period of at least 10 consecutive hours.
- 6.5 To remove any doubt, the period of time in which an FCM is held in a standby-like arrangement must be treated as a duty period for the purposes of this CAO.

*Note* For example, the period spent in a standby-like arrangement must be included as part of a following FDP assigned to the FCM or added to the preceding FDP when determining minimum off-duty periods under clause 8.

## 7 Positioning

On completion of assigned flight duties in an FDP (the **relevant FDP**), an FCM may position to a suitable location as required by the AOC holder.

*Note* As with any duty, the time spent in positioning after completion of the FDP must be added to the relevant FDP when determining minimum off-duty periods under clause 8.

## 8 Off-duty periods

### *Off-duty period following an FDP*

- 8.1 If the sum of an FCM's FDP, and his or her duty time (if any) after completion of the FDP but before commencement of the following off-duty period, does not exceed 12 hours, his or her following off-duty period must be at least as follows:
  - (a) if the FCM is undertaking the off-duty period away from home base — 10 hours;
  - (b) if the FCM is undertaking the off-duty period at home base — 12 hours.
- 8.2 If the sum of an FCM's FDP, and his or her duty time (if any) after completion of the FDP but before commencement of the following off-duty period (**other duty time**), exceeds 12 hours, his or her following off-duty period must be at least the sum of:
  - (a) 12 hours; and
  - (b) 1.5 times the time that the FDP and the other duty time exceeded 12 hours.

### *Reduction in off-duty period*

- 8.3 Despite subclause 8.1, if the sum of an FCM's FDP (the **last FDP**), and his or her duty time (if any) after completion of the FDP but before commencement of the following off-duty period (**other duty time**), does not exceed 10 hours, his or her following off-duty period (**ODP 2**), may be reduced to not less than 9 hours provided that:
  - (a) the off-duty period undertaken immediately before the last FDP was at least 12 hours, including a local night; and
  - (b) the ODP 2 is undertaken over a local night; and
  - (c) the ODP 2 is not undertaken at home base; and

- (d) the off-duty period following the FDP after ODP 2 is at least 12 hours, including a local night.
- 8.4 Despite subclause 8.2, if, after an FDP (the *first FDP*) but before the next FDP (the *second FDP*), the off-duty period calculated under this clause is more than 14 hours, the off-duty period may be reduced to not less than 14 hours, provided that:
- (a) the reduced off-duty period is undertaken away from home base; and
  - (b) the first FDP was not extended past the FDP limit provided for under the AOC holder's operations manual; and
  - (c) the off-duty period following the second FDP is of at least 36 consecutive hours and includes 2 local nights.

#### *Off-duty periods for cumulative fatigue recovery*

- 8.5 Before beginning an FDP or standby, an FCM must have had at least 36 consecutive hours off-duty, including 2 local nights, in the 168 hours before the projected end time of the assigned FDP or assigned standby.
- 8.6 Before beginning an FDP or standby, an FCM must have had at least 6 days off-duty in the 28 consecutive days before the standby or FDP commences.

### **9 Limit on cumulative flight time**

- 9.1 The cumulative flight time accrued by an FCM during any consecutive 28-day period must not exceed 100 hours.
- 9.2 The cumulative flight time accrued by an FCM during any consecutive 365-day period must not exceed 1 000 hours.

### **10 Limit on cumulative duty time**

- 10.1 The cumulative duty accrued by an FCM during any consecutive 168-hour period must not exceed 60 hours.
- 10.2 The cumulative duty accrued by an FCM during any consecutive 336-hour period must not exceed 100 hours.

*Note* 168 hours is the number of hours in a 7-day period, and 336 hours is the number of hours in a 14-day period.

### **11 Limits on infringing the WOCL and early starts**

- 11.1 Subject to subclause 11.3, an FCM must not be assigned more than 3 consecutive early starts.
- 11.2 Subject to subclause 11.3, an FCM, whose duties have already infringed 3 consecutive WOCLs, must not be assigned an FDP that would again infringe the WOCL without at least an intervening off-duty period that includes a local night.
- Note* See paragraph 6.2 of this CAO for duties that infringe a WOCL.
- 11.3 Despite subclauses 11.1 and 11.2, the FCM may have a 4<sup>th</sup>, or a 4<sup>th</sup> and a 5<sup>th</sup>, consecutive early start (whether or not the start infringes the WOCL) if:
- (a) the maximum FDP permissible on the day of the 4<sup>th</sup> early start is reduced by 2 hours; and
  - (b) the maximum FDP permissible on the day of the 5<sup>th</sup> early start is reduced by 4 hours.

## **12 Maximum durations must not be exceeded**

Unless an extension is permitted under clause 5, in performing duty an FCM must not exceed the following:

- (a) the maximum duration of the FDP specified for the FCM in the AOC holder's operations manual;
- (b) the maximum flight time specified for the FCM in the AOC holder's operations manual.

## APPENDIX 4 ANY OPERATIONS

*Note* This Appendix would generally be used by an AOC holder conducting single-pilot air transport operations. However, it may also be used by an operator conducting multi-pilot operations, aerial work operations, flight training, or any combination of operations. The enhanced fatigue management obligations set out in subsection 15 of this CAO apply to an AOC holder operating under this Appendix.

### 1 Sleep opportunity before an FDP or standby

- 1.1 An FCM must not be assigned or commence an FDP or standby commencing away from home base unless he or she has at least 8 consecutive hours' sleep opportunity within the 10 hours immediately before:
  - (a) if the commencement of the FDP has not been delayed — commencing the FDP; or
  - (b) subject to paragraph (c), if the commencement of the FDP has been delayed — the original reporting time for the FDP; or
  - (c) if the commencement of the FDP has been delayed by a single delay of 10 hours or more — commencing the FDP following the delay; or
  - (d) for a standby — commencing the standby.
- 1.2 An FCM must not be assigned or commence an FDP or standby commencing at home base unless he or she has at least 8 consecutive hours' sleep opportunity within the 12 hours immediately before:
  - (a) if the commencement of the FDP has not been delayed — commencing the FDP; or
  - (b) subject to paragraph (c), if the commencement of the FDP has been delayed — the original reporting time for the FDP; or
  - (c) if the commencement of the FDP has been delayed by a single delay of 10 hours or more — commencing the FDP following the delay; or
  - (d) for a standby — commencing the standby.

*Note* See subsection 6 of this CAO for the definition of *sleep opportunity*, where it is defined as occurring during an off-duty period.

### 2 FDP and flight time limits

- 2.1 An FCM must not be assigned an FDP longer than the number of hours specified in Table 2.1 in this clause (the **FDP limit**), as determined by the local time at the start of the FDP.
- 2.2 An FCM must not be assigned or commence flight time for flight training during an FDP unless the flight training is conducted during the first 7 hours of the FDP's flight time.
- 2.3 In applying Table 2.1, first, choose the appropriate local time at which the FDP for the FCM is to start. The maximum FDP for the FCM is the number that corresponds to the chosen local time at which the FDP for the FCM is to start.

**Table 2.1 Maximum FDP (in hours) according to local time at start of FDP**

<b>Local time at start of FDP</b>	<b>Maximum FDP</b>
<b>0500 – 0559</b>	9
<b>0600 – 0759</b>	10
<b>0800 – 1059</b>	11
<b>1100 – 1359</b>	10
<b>1400 – 2259</b>	9
<b>2300 – 0459</b>	8

### **3 Increase in FDP limits by split duty**

- 3.1 Subject to subclause 3.4, where an FDP contains a split-duty rest period of at least 4 consecutive hours with access to suitable sleeping accommodation, the maximum FDP worked out under clause 2 may be increased by up to 4 hours.
- 3.2 After an FDP mentioned in subclause 3.1, the first 4 hours of the split-duty rest period may be reduced by 2 hours for the purpose of determining the subsequent off-duty period or cumulative duty time under clause 8 or 10 of this Appendix.
- 3.3 Subject to subclause 3.4, where an FDP contains a split-duty rest period of at least 2 consecutive hours with access to suitable resting accommodation, the FDP limits under subclause 2.1 may be increased by half the duration of the split-duty rest period, provided the increase is not more than 2 hours.
- 3.4 If a split-duty rest period includes any period between the hours of 2300 to 0529 local time, then:
  - (a) the split-duty rest period must be for a consecutive period of at least 7 hours with access to suitable sleeping accommodation; and
  - (b) the maximum FDP may be increased to 15 hours (if not already permitted); and
  - (c) the reduction in the subsequent off-duty period and cumulative duty time, provided for in subclause 3.2, does not apply.
- 3.5 Any remaining portion of an FDP following a split-duty rest period must be no longer than 5 hours.

*Note* These are the maximum FDP and flight time limits under this Appendix unless, for any particular FCM, other provisions have the effect of reducing these limits (for example, subsections 14 and 15 of this CAO).

### **4 Delayed reporting time**

#### *Delays without operations manual procedures*

- 4.1 Subclauses 4.2 to 4.4 apply to an AOC holder if the operations manual does not have procedures for delays.
- 4.2 The AOC holder may:
  - (a) only delay an FCM's reporting time (the **original reporting time**) if the FCM is first informed of the delay at least 10 hours before the reporting time; and
  - (b) if paragraph (a) applies — consider the period between the original reporting time and the new reporting time (the **period of the delay**) to be an off-duty period; and

- (c) if paragraph (b) applies — at the end of the off-duty period, assign an FDP to the FCM subject to the applicable limits set out in this Appendix or another Appendix of this CAO.
- 4.3 If the AOC holder:
- (a) delays the FCM’s original reporting time; and
  - (b) does not inform the FCM of the delay at least 10 hours before the original reporting time;
- then the FCM’s FDP is taken to commence at the original reporting time.
- 4.4 If subclause 4.3 applies, the off-duty period requirements of this Appendix apply to the FCM whether or not the flight occurs.

***Delays under operations manual procedures***

- 4.5 Subclauses 4.6 to 4.13 apply to an AOC holder if the operations manual has procedures for 1 or more delays.
- 4.6 If an AOC holder’s operations manual has procedures for delays, the AOC holder may delay an FCM’s original reporting time if the AOC holder informs the FCM of the new reporting time as follows:
- (a) if the FCM is at home base:
    - (i) at least 2 hours before the original reporting time; and
    - (ii) at least 2 hours before each new reporting time; or
  - (b) if the FCM is not at home base:
    - (i) at least 1 hour before the original reporting time; and
    - (ii) at least 1 hour before each new reporting time.
- 4.7 If an FCM is informed of a delay in accordance with subclause 4.6, the period between the original reporting time and the final new reporting time is deemed to be standby.
- Note* The period mentioned in subclause 4.7 is deemed to be standby whether or not subparagraph (b) of the definition of ***standby*** is met.
- 4.8 If an FCM is not informed of a delay in accordance with subclause 4.6, the FCM’s FDP is taken to commence at whichever of the following is the later:
- (a) the original reporting time; or
  - (b) the last new reporting time following a delay of which the FCM was informed in accordance with subclause 4.6.
- 4.9 If subclause 4.8 applies, the off-duty period requirements of this Appendix apply to the FCM whether or not the flight occurs.

***A single delay of at least 10 hours under operations manual procedures***

- 4.10 Despite subclause 4.7, if the period of any single delay to an FCM’s FDP is at least 10 hours, the AOC holder may:
- (a) consider the period of the delay to be an off-duty period; and
  - (b) at the end of the off-duty period, assign an FDP to the FCM subject to the applicable limits set out in this Appendix or another Appendix of this CAO.

***Maximum FDP after delay under operations manual procedures***

- 4.11 Subject to subclause 4.13, if:
- (a) an FCM’s FDP is delayed under subclause 4.6; and

- (b) the FDP commences at a new reporting time that is within 4 hours of the original reporting time;
- then the maximum FDP must be based on whichever of the following is the more limiting in calculating the FDP:
- (c) the original reporting time;
  - (d) the new reporting time.
- 4.12 Subject to subclause 4.13, if:
- (a) the FCM's FDP is delayed under subclause 4.6; and
  - (b) the FDP commences at a new reporting time that is at least 4 hours after the original reporting time;
- then:
- (c) the FDP is taken to have commenced 4 hours after the original reporting time; and
  - (d) the maximum FDP must be based on whichever of the following is the more limiting in calculating the FDP:
    - (i) the original reporting time;
    - (ii) the time at which the FDP is taken to have commenced in accordance with paragraph (c).
- 4.13 The combined duration of 1 or more delays and the immediately following FDP must not exceed 16 hours unless the FDP contains a split-duty rest period.

***Cancellations — with or without operations manual procedures for delays***

- 4.14 If:
- (a) an FCM's FDP is delayed under subclause 4.2 or 4.6; and
  - (b) the AOC holder informs the FCM that the flight will not occur (***cancellation***);
- then the FCM must have an off-duty period of at least 10 consecutive hours, commencing from the time he or she is informed of the cancellation, before again being assigned an FDP in accordance with this Appendix or another Appendix of this CAO.

***Meaning of "informed"***

- 4.15 In this clause:
- informed*** means informed by the AOC holder in accordance with procedures in the holder's operations manual for communicating information between the holder and an FCM.

**5 Reassignment and extension**

- 5.1 After an FCM's assigned FDP commences, the AOC holder may reassign to the FCM a modified FDP (a ***reassignment***), provided that each of the following applies:
- (a) subject to subclause 5.3 — the modified FDP does not exceed the applicable limits in the holder's operations manual;
  - (b) the FCM has confirmed that he or she is fit for the reassignment.

*Note* Fitness in this context is based on the FCM's self-assessment. An FCM has an obligation under paragraph 16.1 of this CAO not to carry out any task for a flight if, due to fatigue, the FCM is, or is likely to become, unfit for the task. If such circumstances apply, the FCM must decline the reassignment.

- 5.2 If subclause 5.1 applies, the FCM may continue in the modified FDP in accordance with subclause 5.1.
- 5.3 Despite the FDP limits provided in the operations manual, in unforeseen operational circumstances at the discretion of the pilot in command, the FDP limits in the operations manual may be extended by up to 1 hour.
- 5.4 Before exercising the discretion under subclause 5.3 to extend the FDP limit, the pilot in command must be satisfied that he or she is fit for the extension.
- 5.5 Flight training for up to 30 minutes may be conducted after the first 7 hours of the FDP's flight time if:
- (a) unforeseen operational circumstances arise after the commencement of the FDP; and
  - (b) it is operationally necessary in order to complete the duty; and
  - (c) the FCM considers himself or herself fit for the extension.
- 5.6 An FDP limit must not be reassigned or extended under this clause if it would cause an FCM to exceed the cumulative flight time limits in clause 9 or the cumulative duty time limits in clause 10.
- 5.7 Despite any limit or number under this Appendix, if:
- (a) unforeseen operational circumstances arise after take-off on the final sector of an FDP; and
  - (b) the unforeseen operational circumstances would cause an FCM to exceed any limit or number permitted under this Appendix;

then the flight may continue to the planned destination or alternate at the discretion of the pilot in command.

*Note 1* Under regulation 224 of CAR, the pilot in command of an aircraft is responsible for the conduct and safety of members of the crew on the aircraft and, therefore, has a discretion to not permit an extension to occur even if otherwise permissible under this clause.

*Note 2* Guidance on the assessment of individual cognitive and physical fitness is contained in CAAP 48-01.

## 6 Standby limits and standby-like arrangements

- 6.1 An AOC holder must not require an FCM to be on continuous standby for a period longer than 14 hours.
- 6.2 The maximum allowable FDP after a call out from standby must be decreased by the number of hours by which the standby exceeds 4 hours.
- 6.3 A standby which is completed without a call out must be followed by an off-duty period of at least 10 consecutive hours.
- 6.4 To remove any doubt, the period of time in which an FCM is held in a standby-like arrangement must be treated as a duty period for the purposes of this CAO.

*Note* For example, the period spent in a standby-like arrangement must be included as part of a following FDP assigned to the FCM or added to the preceding FDP when determining minimum off-duty periods under clause 8.

## 7 Positioning

On completion of assigned flight duties in an FDP (the *relevant FDP*), an FCM may position to a suitable location as required by the AOC holder.

*Note* As with any duty, the time spent in positioning after completion of the FDP must be added to the relevant FDP when determining minimum off-duty periods under clause 8.

## 8 Off-duty periods

### *Off-duty period following an FDP*

- 8.1 If the sum of an FCM's FDP, and his or her duty time (if any) after completion of the FDP but before commencement of the following off-duty period, does not exceed 12 hours, his or her following off-duty period must be at least as follows:
- (a) if the FCM is undertaking the off-duty period away from home base — the sum of:
    - (i) 10 hours; and
    - (ii) the amount that the displacement time exceeds 3 hours if travelling west, or 2 hours if travelling east;
  - (b) if the FCM is undertaking the off-duty period at home base — the sum of:
    - (i) 12 hours; and
    - (ii) the amount that the displacement time exceeds 3 hours if travelling west, or 2 hours if travelling east.
- 8.2 If the sum of an FCM's FDP, and his or her duty time (if any) after completion of the FDP but before commencement of the following off-duty period (***other duty time***), exceeds 12 hours, his or her following off-duty period must be at least 12 hours, plus the sum of:
- (a) 1.5 times the time that the FDP and the other duty time exceeded 12 hours; and
  - (b) the amount that the displacement time exceeds 3 hours if travelling west, or 2 hours if travelling east.

### **Reduction in off-duty period**

- 8.3 Despite subclause 8.1, if the sum of an FCM's FDP (the ***last FDP***), and his or her duty time (if any) after completion of the FDP but before commencement of the following off-duty period, does not exceed 10 hours, his or her following off-duty period (***ODP 2***), may be reduced to not less than 9 hours provided that:
- (a) the off-duty period undertaken immediately before the last FDP was at least 12 hours, including a local night; and
  - (b) the ODP 2 is undertaken over a local night; and
  - (c) the ODP 2 is not undertaken at home base; and
  - (d) the off-duty period following the FDP after ODP 2 is at least 12 hours, including a local night.
- 8.4 Despite subclause 8.2, if, after an FDP (the ***first FDP***), but before the next FDP (the ***second FDP***), the off-duty period calculated under this clause is more than 14 hours, the off-duty period may be reduced to not less than 14 hours, provided that:
- (a) the reduced off-duty period is undertaken away from home base; and
  - (b) the first FDP was not extended past the FDP limit provided for under the AOC holder's operations manual; and
  - (c) the off-duty period following the second FDP is of at least 36 consecutive hours and includes 2 local nights.

### *Off-duty periods for cumulative fatigue recovery*

- 8.5 Before beginning any standby time or FDP, an FCM must have had at least 36 consecutive hours off-duty, including 2 local nights, in the 168 hours before the projected end time of the assigned FDP or assigned standby.
- 8.6 Before beginning any standby time or FDP, an FCM must have had at least 6 days off-duty in the 28 consecutive days before the standby or FDP commences.

## **9 Limit on cumulative flight time**

- 9.1 The cumulative flight time accrued by an FCM during any consecutive 28-day period must not exceed 100 hours.
- 9.2 The cumulative flight time accrued by an FCM during any consecutive 365-day period must not exceed 1 000 hours.

## **10 Limit on cumulative duty time**

- 10.1 The cumulative duty accrued by an FCM during any consecutive 168-hour period must not exceed 60 hours.
- 10.2 The cumulative duty accrued by an FCM during any consecutive 336-hour period must not exceed 100 hours.

*Note* 168 hours is the number of hours in a 7-day period, and 336 hours is the number of hours in a 14-day period.

## **11 Limits on infringing the WOCL and early starts**

- 11.1 Subject to subclause 11.3, an FCM must not be assigned more than 3 consecutive early starts.
- 11.2 Subject to subclause 11.3, an FCM, whose duties have already infringed 3 consecutive WOCLs, must not be assigned an FDP that would again infringe the WOCL without at least an intervening off-duty period that includes a local night.

*Note* See paragraph 6.2 of this CAO for duties that infringe a WOCL.

- 11.3 Despite subclauses 11.1 and 11.2, the FCM may have a 4<sup>th</sup>, or a 4<sup>th</sup> and a 5<sup>th</sup>, consecutive early start (whether or not the start infringes the WOCL) if:
  - (a) the maximum FDP permissible on the day of the 4<sup>th</sup> early start is reduced by 2 hours; and
  - (b) the maximum FDP permissible on the day of the 5<sup>th</sup> early start is reduced by 4 hours.

## **12 Maximum durations must not be exceeded**

Unless an extension is permitted under clause 5, in performing duty an FCM must not exceed the following:

- (a) the maximum duration of the FDP specified for the FCM in the AOC holder's operations manual;
- (b) the maximum flight time specified for the FCM in the AOC holder's operations manual.

## APPENDIX 4A BALLOON OPERATIONS

### 1 Sleep opportunity before an FDP

An FCM must not be assigned or commence an FDP unless he or she has at least:

- (a) 8 consecutive hours' sleep opportunity within the 10 hours immediately before commencing the FDP; or
- (b) 10 hours' sleep opportunity, of which at least 6 must be consecutive, within the 24 hours immediately before commencing the FDP.

*Note* See subsection 6 of this CAO for the definition of *sleep opportunity*, where it is defined as occurring during an off-duty period.

### 2 FDP limits

- 2.1 An FCM must not be assigned an FDP longer than the number of hours specified in Table 2.1 in this clause (the *FDP limit*), as determined by whether or not the FDP contains a split-duty rest period.

**Table 2.1 Maximum FDP (in hours) for an FCM according to whether or not the FDP contains a split-duty rest period**

Does the FDP contain a split-duty rest period?	Maximum FDP (hours)
No	6
Yes	10

- 2.2 An FCM cannot continue in an FDP for longer than 6 hours unless he or she has completed or commenced a split-duty rest period of at least 4 consecutive hours.

### 3 Increase in FDP limits by split duty

- 3.1 Subject to subclause 3.4, where an FDP contains a split-duty rest period of at least 4 consecutive hours with access to suitable sleeping accommodation (the *split-duty rest period*), the maximum FDP may be increased by the duration of the split-duty rest period to a maximum of 15 hours.
- 3.2 After an FDP mentioned in subclause 3.1, the first 4 hours of the split-duty rest period may be reduced by 2 hours for the purpose of determining the subsequent off-duty period or cumulative duty time under clause 5 or 7 of this Appendix.
- 3.3 If a split-duty rest period includes any period between the hours of 2100 to 0329 local time, then:
  - (a) the split-duty rest period must be for a consecutive period of at least 7 hours with access to suitable sleeping accommodation; and
  - (b) subclause 3.2 does not apply.
- 3.4 Any remaining portion of an FDP following a split-duty rest period must be no longer than 5 hours.

*Note* These are the maximum FDP and flight time limits under this Appendix unless, for any particular FCM, other provisions have the effect of reducing these limits (for example, subsections 14 and 15 of this CAO).

## 4 Extensions

- 4.1 Despite the FDP limits provided in the operations manual, in unforeseen operational circumstances at the discretion of the pilot in command, the FDP limits in the operations manual may be extended up to a maximum of 1 hour if:
- (a) the FDP has commenced; and
  - (b) the FCM considers himself or herself fit for the extension.
- 4.2 An FDP limit must not be extended under this clause if it would cause an FCM to exceed the cumulative flight time limits in clause 6 or the cumulative duty time limits in clause 7.
- 4.3 Despite any limit or number under this Appendix, if:
- (a) unforeseen operational circumstances arise after take-off on the final sector of an FDP; and
  - (b) the unforeseen operational circumstances would cause an FCM to exceed any limit or number permitted under this Appendix;

then the flight may continue to the planned destination at the discretion of the pilot in command.

*Note 1* Under regulation 224 of CAR, the pilot in command of an aircraft is responsible for the conduct and safety of members of the crew on the aircraft and, therefore, has a discretion to not permit an extension to occur even if otherwise permissible under this clause.

*Note 2* Guidance on the assessment of individual cognitive and physical fitness is contained in CAAP 48-01.

## 5 Off-duty periods

- 5.1 Following an FDP, an FCM must have an off-duty period of at least 10 consecutive hours.
- 5.2 Despite subclause 5.1, an FCM may take 2 off-duty periods of not less than 4 consecutive hours each, with an intervening duty period of not more than 2 hours, provided the total duration of the 2 off-duty periods is not less than 13 hours.

*Note* The sleep opportunity requirements in clause 1 continue to apply. For example, if the use of 2 off-duty periods does not allow for a single period of 8 consecutive hours prior sleep opportunity, then paragraph 1.1 (b) of this Appendix provides for the option of using 2 or more periods to achieve a prior sleep opportunity of 10 hours, provided 1 of the periods is a minimum of 6 consecutive hours.

- 5.3 Before beginning any FDP, an FCM must have had at least 2 full days (consecutively or otherwise) off-duty in the 14 consecutive days before the projected end time of the assigned FDP.
- 5.4 For subclause 5.3, a **full day** means the period between 2 consecutive midnights.

## 6 Limit on cumulative flight time

The cumulative flight time accrued by an FCM during any consecutive 28-day period must not exceed 50 hours.

## 7 Limit on cumulative duty time

- 7.1 The cumulative duty accrued by an FCM during any consecutive 168-hour period must not exceed 45 hours.
- 7.2 The cumulative duty accrued by an FCM during any consecutive 336-hour period must not exceed 84 hours.

*Note* 168 hours is the number of hours in a 7-day period, and 336 hours is the number of hours in a 14-day period.

## APPENDIX 4B MEDICAL TRANSPORT OPERATIONS AND EMERGENCY SERVICE OPERATIONS

### 1 FDP and flight time limits

- 1.1 An FCM must not be assigned an FDP longer than the number of hours specified in Table 1.1 in this clause (the **FDP limit**), as determined by the local time at the start of the FDP and, for a multi-pilot operation, the number of sectors to be flown.

**Table 1.1 Maximum FDP (in hours) for an FCM according to local time at the start of the FDP**

Local time at start of FDP	Maximum FDP		
	Single-pilot operation	Multi-pilot operation	
		1-2 sectors	3+ sectors
<b>0500 – 0559</b>	11	12	12
<b>0600 – 0659</b>	11.5	13	12.5
<b>0700 – 1159</b>	12	14	13
<b>1200 – 1459</b>	11	13	12
<b>1500 – 1559</b>	10.5	12	11.5
<b>1600 – 0459</b>	10	11	11

FDP limit may be increased twice per 168-hour period

- 1.2 Despite subclause 1.1, the FDP limit for an FCM may be increased to not more than the following limits (an **increased FDP**) provided the conditions in subclause 1.3 are complied with:

- (a) for a single-pilot operation — 12 hours;
- (b) for any multi-pilot operation — 14 hours.

- 1.3 For subclause 1.2:

- (a) there must be no more than 2 increased FDPs in any 168 consecutive hour period; and
- (b) the off-duty period before commencing an increased FDP must be not less than 12 hours; and
- (c) an increased FDP must be followed by an off-duty period of not less than 12 hours; and
- (d) an increased FDP must not be further increased by a split-duty rest period under clause 2, but it may be extended under clause 3.

*Note* Clause 5 also requires that an FCM who conducts an increased FDP under this clause has an off-duty period of at least 36 hours, including 2 local nights, during the 168 consecutive hour period.

- 1.4 An FCM must not be assigned or commence flight time for flight training during an FDP unless the flight training is conducted during the first 7 hours of the FDP's flight time.

*Note* Subclause 1.4 does not apply to a flight review or a proficiency check because these are not flight training as defined in paragraph 6.1 of this CAO.

- 1.5 If, in the 8 hours immediately before an FDP (the **8-hour period**), an FCM performed duties other than conducting a flight in an aircraft (**non-flying duties**) the maximum permissible duration of the FDP must be decreased by the greater of:
  - (a) 30 minutes; or
  - (b) the total duration of the non-flying duties performed during the 8-hour period.
- 1.6 An FCM must not exceed an FDP limit set out in the AOC holder's operations manual in accordance with this CAO.

## **2 Increase in FDP limits by split duty**

- 2.1 Subject to subclauses 2.2 and 2.6, if an FDP contains a split-duty rest period of at least 2 consecutive hours with access to suitable sleeping accommodation, the FDP worked out under clause 1 may be increased by the duration of the split-duty rest period.
- 2.2 For subclause 2.1, the remaining length of the FDP resumed at the time the split-duty rest period ends (the **resumption time**) must not be greater than the FDP limit that would apply under Table 1.1 to an FCM who commenced a new FDP at the resumption time.
- 2.3 After an FDP mentioned in subclause 2.1, the duration of the split-duty rest period may be reduced by 50% in determining the subsequent off-duty period under subclause 5.1 or cumulative duty time under clause 7.
- 2.4 Subject to subclause 2.6, if an FDP contains 1 or 2 split-duty rest periods, each of at least 2 consecutive hours with access to suitable resting accommodation, the maximum FDP worked out under clause 1 may be increased by half the duration of the split-duty rest period or periods up to a total of 2 hours.
- 2.5 The requirements of subclause 5.1 are taken to be met if an FDP contains a split-duty rest period with access to suitable sleeping accommodation, and the split-duty rest period is:
  - (a) of at least 10 consecutive hours, plus the number of hours difference in local time between the location where the FDP commenced and the location where the split-duty rest period is undertaken; and
  - (b) undertaken over a local night.
- 2.6 An FDP that includes a split-duty rest period must not exceed 16 hours.

*Note* For any particular FCM, other provisions of this CAO may have the effect of reducing maximum FDP limits under this Appendix (see, for example, subsections 14 and 15 of this CAO).

## **3 Extensions**

- 3.1 Subject to subclause 3.3, in unforeseen operational circumstances, at the discretion of the FCM, an FDP may be extended, by up to a maximum of 2 hours for a multi-pilot operation, or 1 hour for a single-pilot operation, beyond:
  - (a) the FDP limit specified in Table 1.1 (including that limit as increased under subclause 1.2); or
  - (b) the FDP limit specified in Table 1.1 as increased by a split-duty rest period under clause 2, provided the extended FDP does not exceed 16 hours.
- 3.2 Subject to subclause 3.3, if:
  - (a) an AOC holder has urgent operations procedures in the operations manual; and

- (b) an operation is deemed to be urgent in accordance with the manual;  
then at the discretion of the FCM, an FDP containing an urgent operation may be extended by up to a maximum of 4 hours beyond:
  - (c) the FDP limit specified in Table 1.1 (including that limit as increased under subclause 1.2), provided the extended FDP does not exceed 16 hours; or
  - (d) the FDP limit specified in Table 1.1 as increased by a split-duty rest period under clause 2, provided the extended FDP does not exceed 16 hours.
- 3.3 Before exercising the discretion under subclause 3.1 or 3.2 to extend the FDP limit of an FCM, the pilot in command of a multi-pilot operation must:
- (a) do the following:
    - (i) consult each FCM who is a crew member on the aircraft;
    - (ii) be satisfied that each FCM considers himself or herself fit for the extension;
  - (b) if the FCM whose FDP would be extended is the pilot in command — do the following:
    - (i) consult each FCM who is a crew member on the aircraft;
    - (ii) be satisfied that, as pilot in command, he or she is fit for the extension.
- Note* Due to the nature of medical transport operations and emergency service operations, for urgent operations extensions may be permitted in operational circumstances where the operator and the flight crew are satisfied the safety of the flight will not be impacted by fatigue.
- 3.4 Despite the limits provided in the operations manual, the flight time limit for an FDP may be extended by not more than 30 minutes if:
- (a) it is operationally necessary in order to complete the duty; and
  - (b) the FCM, or each FCM, considers himself or herself fit for the extension.
- 3.5 Flight training for up to 30 minutes may be conducted after the first 7 hours of the FDP's flight time if:
- (a) unforeseen operational circumstances arise after the commencement of the FDP; and
  - (b) it is operationally necessary in order to complete the duty; and
  - (c) the FCM considers himself or herself fit for the extension.
- 3.6 An FDP limit must not be extended under this clause if it would cause an FCM to exceed the cumulative flight time limits in clause 7.
- 3.7 Despite any limit or number under this Appendix, if:
- (a) unforeseen operational circumstances arise after take-off on the final sector of an FDP; and
  - (b) the unforeseen operational circumstances would cause an FCM to exceed any limit or number permitted under this Appendix;

then the flight may continue to the planned destination or alternate at the discretion of the pilot in command.

*Note 1* Under regulation 224 of CAR, the pilot in command of an aircraft is responsible for the conduct and safety of members of the crew on the aircraft and, therefore, has a discretion to not permit an extension to occur even if otherwise permissible under this clause.

*Note 2* Guidance on the assessment of individual cognitive and physical fitness is contained in CAAP 48-01.

## 4 Standby

- 4.1 An FCM may be placed on standby.
- 4.2 If an FCM is called out from standby to commence an FDP (which may include a split-duty rest period), the FDP must be followed by an off-duty period in accordance with clause 5.
- 4.3 If an FCM is called out to commence duties other than flying duties, the FCM may return to standby following that duty period. However, subclause 1.6 applies to a subsequent FDP.

## 5 Off-duty period limits

### *Off-duty period following an FDP*

- 5.1 Immediately after an FDP, an FCM must have an off-duty period of at least the following consecutive hours, during which there must be access to suitable sleeping accommodation for at least 8 consecutive hours:
  - (a) if the off-duty period includes the period between 2300 and 0559 hours local time — the sum of:
    - (i) 8 hours; and
    - (ii) the amount of time that the FDP exceeds 12 hours (provided the excess is not due to an extension mentioned in subparagraph (iv)); and
    - (iii) the amount of displacement time of the FDP; and
    - (iv) 1 hour for every 30 minutes, or part of 30 minutes, that the FDP was extended beyond the FDP limit;
  - (b) if the off-duty period does not include the period between 2300 and 0559 hours local time — the sum of:
    - (i) 10 hours; and
    - (ii) the amount of time that the FDP exceeds 12 hours (provided the excess is not due to an extension mentioned in subparagraph (iv)); and
    - (iii) the amount of displacement time of the FDP; and
    - (iv) 1 hour for every 30 minutes, or part of 30 minutes, that the FDP was extended beyond the FDP limit.

### *Reduction in off-duty period*

- 5.2 If an off-duty period calculated under subclause 5.1 is greater than 12 hours, the off-duty period may be reduced to not less than 12 hours provided that:
  - (a) the next FDP is conducted under this Appendix; and
  - (b) the off-duty period following the next FDP is at least 24 hours.

### *Off-duty periods for cumulative fatigue recovery*

- 5.3 If, in any consecutive 168-hour period (the *period*), an FCM conducts either:
  - (a) 3 or more FDPs, each of which involves a late-night operation; or
  - (b) an increased FDP in accordance with subclause 1.2;then the FCM must have an off-duty period of at least 36 consecutive hours, including 2 local nights during the period.

- 5.4 Before beginning an FDP or standby, an FCM must have had at least 1 of the following:
- (a) in any consecutive 336-hour period before the projected end of the assigned FDP or standby — 1 off-duty period of at least 36 consecutive hours, including 2 local nights;
  - (b) in any consecutive 504-hour period before the projected end of the assigned FDP or assigned standby — 1 off-duty period of at least 72 consecutive hours, including 3 local nights.

*Note* 336 hours is the number of hours in a 14-day period, and 504 hours is the number of hours in a 21-day period.

## **6 Limit on cumulative flight time**

- 6.1 The cumulative flight time accrued by an FCM during any consecutive 28-day period must not exceed 100 hours.
- 6.2 The cumulative flight time accrued by an FCM during any consecutive 365-day period must not exceed 1 000 hours.

## **7 Limit on cumulative duty time**

- 7.1 The cumulative duty time accrued by an FCM during any consecutive 168-hour period (the *period*) must not exceed:
- (a) if an FCM has not had at least 1 off-duty period of at least 36 hours, including 2 local nights during the period — 40 hours; and
  - (b) if an FCM has had at least 1 off-duty period of at least 36 hours, including 2 local nights during the period — 60 hours.

*Note* 168 hours is the number of hours in a 7-day period and 336 hours is the number of hours in a 14-day period.

- 7.2 The cumulative duty accrued by an FCM during any consecutive 336-hour period must not exceed 100 hours.

## **8 Limit on late-night operations**

- 8.1 In any period of 168 consecutive hours, an FCM must not be assigned, or conduct, more than 4 FDPs involving late-night operations.
- 8.2 If in any period of 168 consecutive hours (the *period*) an FCM conducts 3 or more FDPs involving late-night operations, the FCM is limited to 40 hours cumulative duty time during the period.

*Note* See also subclause 5.3 which requires that an FCM must have an off-duty period of at least 36 consecutive hours, including 2 local nights if 3 or more late-night operations are conducted during any 168 consecutive hour period.

## **9 Maximum durations must not be exceeded**

Unless an extension is permitted under clause 3, in performing duty an FCM must not exceed the following:

- (a) the maximum duration of the FDP specified for the FCM in the AOC holder's operations manual;
- (b) the maximum flight time specified for the FCM in the AOC holder's operations manual.

## APPENDIX 5 AERIAL WORK OPERATIONS AND FLIGHT TRAINING ASSOCIATED WITH AERIAL WORK

### 1 FDP limits

- 1.1 An FCM must not be assigned an FDP longer than the number of hours specified in Table 1.1 in this clause, as determined by:
- the local time at the start of the FDP; and
  - whether the operation is a single-pilot operation or a multi-pilot operation; and
  - for a multi-pilot operation — whether the number of sectors is 1 or 2, or 3 or more.

*Note* Aerial work operations captured by this Appendix are widely varied. Therefore, operators are reminded to limit FDP in accordance with their operator obligations, and include FDP limits in their operations manual.

- 1.2 An FCM must not be assigned or commence flight time for flight training during an FDP unless the flight training is conducted during the first 7 hours of the FDP's flight time.

**Table 1.1 Maximum FDP (in hours) for an FCM according to local time at the start of the FDP**

Local time at start of FDP	Maximum FDP (hours)		
	Single-pilot operation	Multi-pilot operation	
		For 1 or 2 sectors	For 3 or more sectors
<b>0500 – 0559</b>	11	12	12
<b>0600 – 0659</b>	11.5	13	12.5
<b>0700 – 1159</b>	12	14	13
<b>1200 – 1459</b>	11	13	12
<b>1500 – 1559</b>	10.5	12	11.5
<b>1600 – 0459</b>	10	11	11

*FDP limit may be increased twice per 168-hour period*

- 1.3 Despite subclause 1.1, the FDP limit for an FCM may be increased to not more than the following limits (an **increased FDP**) provided the conditions in subclause 1.4 are complied with:
- for a single-pilot operation — 12 hours;
  - for any multi-pilot operation — 14 hours.
- 1.4 For subclause 1.3:
- there must be no more than 2 increased FDPs in any 168 consecutive hour period; and
  - the off-duty period before commencing an increased FDP must be not less than 12 hours; and
  - an increased FDP must be followed by an off-duty period of not less than 12 hours; and

- (d) an increased FDP must not be further increased by a split-duty rest period under clause 2, but it may be extended under clause 3.

*Note* Clause 5 also requires that an FCM who conducts an increased FDP under this clause has an off-duty period of at least 36 hours, including 2 local nights, during the 168 consecutive hour period.

- 1.5 If, in the 8 hours immediately before an FDP (the **8-hour period**), an FCM performed duties other than conducting a flight in an aircraft (**non-flying duties**) the maximum permissible duration of the FDP must be decreased by the greater of:
  - (a) 30 minutes; or
  - (b) the total duration of the non-flying duties performed during the 8-hour period.
- 1.6 In any 168 consecutive hours, an FCM must not be assigned, or conduct, more than 4 FDPs which include any time between midnight and 0459 local time.
- 1.7 An FCM must not exceed an FDP limit set out in the AOC holder's operations manual in accordance with this CAO.

## **2 Increase in FDP limits by split duty**

- 2.1 If an FDP contains a split-duty rest period of at least 3 consecutive hours at suitable sleeping accommodation, the maximum FDP worked out under clause 1 may be increased by the duration of the split-duty rest period.
- 2.2 Where an FDP contains a split-duty rest period of at least 2 consecutive hours with access to suitable resting accommodation, the maximum FDP worked out under subclause 1.1 may be increased by half the duration of the split-duty rest period, provided the increase is not more than 2 hours.
- 2.3 Any portion of an FDP remaining after a split-duty rest period must be no longer than the sum of 6 hours and any permitted extension under clause 3.

*Note* These are the maximum FDP limits under this Appendix unless, for any particular FCM, other provisions have the effect of reducing these limits (for example, subsections 14 and 15 of this CAO).

## **3 Extensions**

- 3.1 Subject to subclause 3.2, at the discretion of the FCM, an FDP may be extended by up to a maximum of 2 hours beyond:
  - (a) the FDP limit specified in Table 1.1, including that limit as increased under subclause 1.3; or
  - (b) the FDP limit specified in Table 1.1 only, as increased by a split-duty rest period under clause 2.

*Note* Due to the nature of aerial work operations, extensions are permitted in operational circumstances where the FCM is satisfied that the safety of the flight will not be impacted by fatigue.

- 3.2 Before deciding to extend an FDP under subclause 3.1, the pilot in command of a multi-pilot operation must:
  - (a) do the following:
    - (i) consult each FCM who is a crew member on the aircraft;
    - (ii) be satisfied that each FCM considers himself or herself fit for the extension; and
  - (b) if the FCM whose FDP would be extended is the pilot in command — do the following:
    - (i) consult each FCM who is a crew member on the aircraft;
    - (ii) be satisfied that, as pilot in command, he or she is fit for the extension.

- 3.3 Flight training for up to 30 minutes may be conducted after the first 7 hours of the FDP's flight time if:
- (a) unforeseen operational circumstances arise after the commencement of the FDP; and
  - (b) it is operationally necessary in order to complete the duty; and
  - (c) the FCM considers himself or herself fit for the extension.
- 3.4 Subject to subclause 3.5, any extension over the FDP limit requires the off-duty period required by subclause 5.1 to be increased by 1 hour for every 30 minutes, or part of 30 minutes, that the FDP is extended beyond the FDP limit.
- 3.5 If an off-duty period calculated under subclause 3.2 is greater than 12 hours, the off-duty period may be reduced to not less than 12 hours provided that:
- (a) the next FDP is conducted under this Appendix; and
  - (b) the off-duty period following the next FDP is at least 36 hours, including 2 local nights.
- 3.6 An FDP limit must not be extended under this clause if it would cause an FCM to exceed the cumulative flight time limits in clause 6.
- 3.7 Despite any limit or number under this Appendix, if:
- (a) unforeseen operational circumstances arise after take-off on the final sector of an FDP; and
  - (b) the unforeseen operational circumstances would cause an FCM to exceed any limit or number permitted under this Appendix;

then the flight may continue to the planned destination or alternate at the discretion of the pilot in command.

*Note 1* Under regulation 224 of CAR, the pilot in command of an aircraft is responsible for the conduct and safety of members of the crew on the aircraft and, therefore, has a discretion to not permit an extension to occur even if otherwise permissible under this clause.

*Note 2* Guidance on the assessment of individual cognitive and physical fitness is contained in CAAP 48-01.

## **4 Standby**

- 4.1 An FCM may be placed on standby.
- 4.2 If an FCM is called out from standby to commence an FDP (which may include a split-duty rest period), the FDP must be followed by an off-duty period in accordance with clause 5.
- 4.3 If an FCM is called out to commence duties other than flying duties, the FCM may return to standby following that duty period. However, subclause 1.5 applies to a subsequent FDP.

## **5 Off-duty period limits**

### *Off-duty period following an FDP*

- 5.1 Immediately after an FDP, an FCM must have an off-duty period of at least the following number of consecutive hours, during which there must be access to suitable sleeping accommodation for at least 8 consecutive hours:
- (a) if the off-duty period includes the period between 2300 and 0559 hours local time — 8;
  - (b) if the off-duty period does not include the period between 2300 and 0559 hours local time — 10.

*Note* Under subclause 3.2 of this Appendix the off-duty period is increased by 1 hour for every 30 minutes, or part of 30 minutes, that the FDP is extended beyond the FDP limit.

### ***Off-duty periods for cumulative fatigue recovery***

- 5.2 Before beginning an FDP or standby, an FCM must have had at least 1 of the following:
- (a) in any consecutive 336-hour period before the projected end of the assigned FDP or standby — 1 off-duty period of at least 36 consecutive hours, including 2 local nights;
  - (b) in any consecutive 504-hour period before the projected end of the assigned FDP or assigned standby — 1 off-duty period of at least 72 consecutive hours, including 3 local nights.

*Note* 336 hours is the number of hours in a 14-day period, and 504 hours is the number of hours in a 21-day period.

- 5.3 If, in any consecutive 168-hour period (the *period*), an FCM conducts 1 or 2 increased FDPs in accordance with subclause 1.3, the FCM must have an off-duty period of at least 36 consecutive hours, including 2 local nights during the period.

## **6 Limit on cumulative flight time**

- 6.1 The cumulative flight time accrued by an FCM during any consecutive 168-hour period must not exceed 50 hours.
- 6.2 Subject to subclause 6.4, the cumulative flight time accrued by an FCM during any consecutive 28-day period must not exceed 170 hours.
- 6.3 Subject to subclause 6.4, the cumulative flight time accrued by an FCM during any consecutive 90-day period must not exceed 450 hours.
- 6.4 The cumulative flight time limits in subclauses 6.2 and 6.3 may be reset to zero immediately after the FCM is provided with at least 5 consecutive days off-duty.
- 6.5 Subject to subclause 6.6, the cumulative flight time accrued by an FCM during any consecutive 365-day period must not exceed 1 200 hours.
- 6.6 The cumulative flight time limit in subclause 6.5 may be reset to zero if the FCM is provided with at least 28 consecutive days off-duty.

*Note* These cumulative flight time limits are designed to mitigate the effects of cumulative fatigue. AOC holders are reminded, first, of the emotional, cognitive and physical effects of workload on the performance of FCMs in addition to fatigue and, secondly, that these limits are for optimal circumstances and may not be achievable due to hazard identification and other procedures required under subsection 15 of this CAO.

## **7 Maximum durations must not be exceeded**

Unless an extension is permitted under clause 3, in performing duty an FCM must not exceed the following:

- (a) the maximum duration of the FDP specified for the FCM in the AOC holder's operations manual;
- (b) the maximum flight time specified for the FCM in the AOC holder's operations manual.

## APPENDIX 5A DAYLIGHT AERIAL WORK OPERATIONS AND FLIGHT TRAINING ASSOCIATED WITH AERIAL WORK

### 1 Sleep opportunity before an FDP

An FCM must not be assigned or commence an FDP at a location unless he or she:

- (a) has had at least 8 consecutive hours' sleep opportunity within the 10 hours immediately before commencing the FDP; and
- (b) on each of the 3 local nights immediately before commencing the FDP, has not carried out any duties during the 8 hours prior to 30 minutes before morning civil twilight at the location.

*Note* The intent of paragraph (b) is to prohibit an FCM from undertaking an FDP under Appendix 5A if they have undertaken any duties on the 3 nights immediately before the FDP.

### 2 FDP and flight time limits

2.1 An FCM must not be assigned or commence an FDP that:

- (a) begins more than 30 minutes before the beginning of morning civil twilight at the location at which the FDP commences; or
- (b) ends later than the end of evening civil twilight at the location at which the FDP commences.

*Note* This subclause does not affect other legislative requirements that limit Day VFR operations.

2.2 An FCM may only be assigned an FDP with a total duration no longer than 14 hours in any 1 day (the **FDP limit**).

2.3 An FCM must not be assigned or commence flight time for flight training during an FDP unless the flight training is conducted during the first 7 hours of the FDP's flight time.

*Note* Subclause 2.3 does not apply to a flight review or a proficiency check because these are not flight training as defined in paragraph 6.1 of this CAO.

### 3 Extensions

3.1 Subject to subclause 3.2, at the discretion of the FCM, an FDP may be extended up to a maximum of 1 hour beyond the FDP limit in subclause 2.2, provided the FCM considers himself or herself fit for the extension.

3.2 An FDP must not be extended beyond the end of evening civil twilight, unless this is necessary to complete the duties associated with the last daylight flight.

3.3 Flight training for up to 30 minutes may be conducted after the first 7 hours of the FDP's flight time if:

- (a) unforeseen operational circumstances arise after the commencement of the FDP; and
- (b) it is operationally necessary in order to complete the duty; and
- (c) the FCM considers himself or herself fit for the extension.

### 4 Off-duty period limits

4.1 Following an FDP, an FCM must have an off-duty period of at least 10 consecutive hours.

4.2 An FCM must, in any consecutive 384-hour period, have a period of at least 2 consecutive days off-duty.

*Note* 384 hours is the number of hours in a 16-day period.

## **5 Limit on cumulative flight time**

- 5.1 The cumulative flight time accrued by an FCM during any consecutive 384-hour period must not exceed 100 hours.
- 5.2 If the operation is a mustering operation, the cumulative flight time accrued by the FCM during any consecutive 30-day period must not exceed 120 hours if the combined total of his or her flying time in mustering operations as pilot in command and pilot in command under supervision is less than 500 hours.
- 5.3 The cumulative flight time limits in subclauses 5.1 and 5.2 may be reset to zero immediately after the FCM is provided with at least 5 consecutive days off-duty.
- 5.4 The cumulative flight time accrued by an FCM during any consecutive 365-day period must not exceed 1 200 hours.
- 5.5 The cumulative flight time limit in subclause 5.4 may be reset to zero immediately after the FCM is provided with at least 28 consecutive days off-duty.

*Note 1* 384 hours is the number of hours in a 16-day period.

*Note 2* These cumulative flight time limits are designed to mitigate the effects of cumulative fatigue. AOC holders are reminded, first, of the emotional, cognitive and physical effects of workload on the performance of FCMs in addition to fatigue and, secondly, that these limits are for optimal circumstances and may not be achievable due to hazard identification and other procedures required under subsection 15 of this CAO.

## **6 Maximum durations must not be exceeded**

Unless an extension is permitted under clause 3, in performing duty an FCM must not exceed the following:

- (a) the maximum duration of the FDP specified for the FCM in the AOC holder's operations manual;
- (b) the maximum flight time specified for the FCM in the AOC holder's operations manual.

## APPENDIX 6 FLIGHT TRAINING

*Note* Appendix 6 does not apply to flight training in a flight simulation training device.

### 1 Sleep opportunity before an FDP or standby

An FCM must not be assigned or commence an FDP or standby unless he or she has at least 8 consecutive hours' sleep opportunity within the 12 hours immediately before commencing the FDP or standby.

*Note* See subsection 6 of this CAO for the definition of *sleep opportunity*, where it is defined as occurring during an off-duty period.

### 2 FDP and flight time limits

- 2.1 An FCM must not be assigned an FDP longer than the number of hours specified in Table 2.1 in this clause (the *FDP limit*), as determined by the local time at the start of the FDP.
- 2.2 For any FDP, an FCM must not be assigned flight time longer than 7 hours.
- 2.3 In applying Table 2.1, first, choose the appropriate local time at which the FDP for the FCM is to start. The maximum FDP for the FCM is the number that corresponds to the chosen local time at which the FDP for the FCM is to start.

**Table 2.1 Maximum FDP (in hours) according to local time at start of FDP**

Local time at start of FDP	Maximum FDP
0500 – 0559	9
0600 – 0659	10
0700 – 0759	10
0800 – 1059	11
1100 – 1359	10
1400 – 2259	9
2300 – 0459	8

### 3 Increase in FDP limits by split duty

- 3.1 Subject to subclause 3.4, if an FDP contains a split-duty rest period of at least 4 consecutive hours with access to suitable sleeping accommodation, the maximum FDP worked out under clause 2 may be increased by up to 4 hours.
- 3.2 After an FDP mentioned in subclause 3.1, the first 4 hours of the split-duty rest period may be reduced by 2 hours for the purpose of determining the subsequent off-duty period or cumulative duty time under clause 7 or 9 of this Appendix.
- 3.3 Subject to subclause 3.4, where an FDP contains a split-duty rest period of at least 2 consecutive hours with access to suitable resting accommodation, the FDP limits under subclause 2.1 may be increased by half the duration of the split-duty rest period, provided the increase is not more than 2 hours.
- 3.4 If a split-duty rest period includes any period between the hours of 2300 to 0529 local time, then:
  - (a) the split-duty rest period must be for a consecutive period of at least 7 hours with access to suitable sleeping accommodation; and

- (b) the maximum FDP may be increased to 15 hours (if not already permitted); and
  - (c) the reduction in the subsequent off-duty period and cumulative duty time, provided for in subclause 3.2, does not apply.
- 3.5 Unless the FDP is extended under clause 4, any portion of an FDP remaining after a split-duty rest period must be no longer than 5 hours.

*Note* These are the maximum FDP and flight time limits under this Appendix unless, for any particular FCM, other provisions have the effect of reducing these limits (for example, subsections 14 and 15 of this CAO).

#### **4 Reassignment and extension**

- 4.1 After an FCM's assigned FDP commences, the AOC holder may reassign to the FCM a modified FDP (a *reassignment*), provided that each of the following applies:

- (a) subject to subclauses 4.3 and 4.5 — the modified FDP and flight time does not exceed the applicable limits in the holder's operations manual;
- (b) the FCM has confirmed that he or she is fit for the reassignment.

*Note* Fitness in this context is based on the FCM's self-assessment. An FCM has an obligation under paragraph 16.1 of this CAO not to carry out any task for a flight if, due to fatigue, the FCM is, or is likely to become, unfit for the task. If such circumstances apply, the FCM must decline the reassignment.

- 4.2 If subclause 4.1 applies, the FCM may continue in the modified FDP in accordance with subclause 4.1.
- 4.3 Despite the FDP limits provided in the operations manual, in unforeseen operational circumstances at the discretion of the pilot in command, the FDP limits in the operations manual may be extended by up to 1 hour.
- 4.4 Before exercising the discretion under subclause 4.3 to extend an FDP limit in the operations manual, the pilot in command must be satisfied that he or she, and any other FCM, are fit for the extension.
- 4.5 Despite the limits provided in the operations manual, the flight time limit for an FDP may be extended by not more than 30 minutes if:
- (a) unforeseen operational circumstances arise after the commencement of the FDP; and
  - (b) it is operationally necessary in order to complete the duty; and
  - (c) the FCM considers himself or herself fit for the extension.
- 4.6 An FDP limit must not be reassigned or extended under this clause if it would cause an FCM to exceed the cumulative flight time limits in clause 8 or the cumulative duty time limits in clause 9.
- 4.7 Despite any limit or number under this Appendix, if:
- (a) unforeseen operational circumstances arise after take-off on the final sector of an FDP; and
  - (b) the unforeseen operational circumstances would cause an FCM to exceed any limit or number permitted under this Appendix;
- then the flight may continue to the planned destination or alternate at the discretion of the pilot in command.

*Note 1* Under regulation 224 of CAR, the pilot in command of an aircraft is responsible for the conduct and safety of members of the crew on the aircraft and, therefore, has a discretion to not permit an extension to occur even if otherwise permissible under this clause.

*Note 2* Guidance on the assessment of individual cognitive and physical fitness is contained in CAAP 48-01.

## **5 Standby limits and standby-like arrangements**

- 5.1 An AOC holder must not require an FCM to be on continuous standby for a period longer than 14 hours.
- 5.2 The maximum allowable FDP after a call out from standby must be decreased by the number of hours by which the standby exceeds 4 hours.
- 5.3 A standby which is completed without a call out must be followed by an off-duty period of at least 10 consecutive hours.
- 5.4 To remove any doubt, the period of time in which an FCM is held in a standby-like arrangement must be treated as a duty period for the purposes of this CAO.

*Note* For example, the period spent in a standby-like arrangement must be included as part of a following FDP assigned to the FCM or added to the preceding FDP when determining minimum off-duty periods under clause 7.

## **6 Positioning**

On completion of assigned flight duties in an FDP (the *relevant FDP*), an FCM may position to a suitable location as required by the AOC holder.

*Note* As with any duty, the time spent in positioning after completion of the FDP must be added to the relevant FDP when determining minimum off-duty periods under clause 7.

## **7 Off-duty periods**

### *Off-duty period following an FDP*

- 7.1 After an FCM's FDP and any duty time after completion of the FDP but before commencement of the following off-duty period (*other duty time*), his or her following off-duty period must be at least the sum of:
  - (a) 12 hours; and
  - (b) 1.5 times the time that the FDP and the other duty time exceeded 12 hours.

### *Off-duty periods for cumulative fatigue recovery*

- 7.2 Before beginning any standby time or FDP, an FCM must have had at least 36 consecutive hours off-duty, including 2 local nights, in the 168 hours before the projected end time of the assigned FDP or assigned standby.
- 7.3 Before beginning any standby time or FDP, an FCM must have had at least 6 days off-duty in the 28 consecutive days before the standby or FDP commences.

## **8 Limit on cumulative flight time**

- 8.1 The cumulative flight time accrued by an FCM during any consecutive 28-day period must not exceed 100 hours.
- 8.2 The cumulative flight time accrued by an FCM during any consecutive 365-day period must not exceed 1 000 hours.

## **9 Limit on cumulative duty time**

- 9.1 The cumulative duty accrued by an FCM during any consecutive 168-hour period must not exceed 60 hours.
- 9.2 The cumulative duty accrued by an FCM during any consecutive 336-hour period must not exceed 100 hours.

*Note* 168 hours is the number of hours in a 7-day period, and 336 hours is the number of hours in a 14-day period.

## **10 Limits on infringing the WOCL and early starts**

- 10.1 Subject to subclause 10.3, an FCM must not be assigned more than 3 consecutive early starts.
- 10.2 Subject to subclause 10.3, an FCM, whose duties have already infringed 3 consecutive WOCLs, must not be assigned an FDP that would again infringe the WOCL without at least an intervening off-duty period that includes a local night.
- Note* See paragraph 6.2 of this CAO for duties that infringe a WOCL.
- 10.3 Despite subclauses 10.1 and 10.2, the FCM may have a 4<sup>th</sup>, or a 4<sup>th</sup> and a 5<sup>th</sup>, consecutive early start (whether or not the start infringes the WOCL) if:
- (a) the maximum FDP permissible on the day of the 4<sup>th</sup> early start is reduced by 2 hours; and
  - (b) the maximum FDP permissible on the day of the 5<sup>th</sup> early start is reduced by 4 hours.

## **11 Maximum durations must not be exceeded**

Unless an extension is permitted under clause 4, in performing duty an FCM must not exceed the following:

- (a) the maximum duration of the FDP specified for the FCM in the AOC holder's operations manual;
- (b) the maximum flight time specified for the FCM in the AOC holder's operations manual.

## **APPENDIX 7      FATIGUE RISK MANAGEMENT SYSTEM (FRMS)**

### **1      General**

- 1.1 An AOC holder may apply to CASA for:
- (a) a trial FRMS implementation approval, for all or part of its operations; or
  - (b) a full FRMS implementation approval, for all or part of its operations.
- Note* An AOC holder is not eligible for a full implementation approval until the FRMS has been in effective operation for at least 12 months from the date of a trial implementation approval. See clause 9.
- 1.2 For a trial or full FRMS implementation approval, an FRMS must include CASA approval of each of the following elements of the FRMS:
- (a) the policy and objectives, and related documentation, in accordance with clause 2;
  - (b) the practical operating procedures in accordance with clause 3;
  - (c) the hazard identification, risk assessment and mitigation procedures in accordance with clause 4;
  - (d) the safety assurance procedures in accordance with clause 5;
  - (e) the safety promotion procedures in accordance with clause 6;
  - (f) the change management procedures in accordance with clause 7.
- Note 1* Significant changes require CASA approval. See clause 7.
- Note 2* Guidance for the development and implementation of an FRMS is available on the ICAO and CASA websites.
- 1.3 If the AOC holder has an SMS, a trial or full FRMS implementation approval will not be given unless CASA is satisfied that the FRMS is integrated with the SMS.
- 1.4 Before CASA issues a trial FRMS implementation approval, CASA must be satisfied that the AOC holder's FRMS:
- (a) comprises all of the elements mentioned in subclause 1.2; and
  - (b) is a safe, integrated, data-driven, system which appears to be reasonably capable of continuously and effectively monitoring and managing fatigue-related safety risks using scientific principles and knowledge, and operational experience; and
  - (c) will enable the AOC holder to assess the extent to which FCMs and other relevant personnel perform at levels of alertness sufficient to ensure the safety of operations.
- 1.5 Before CASA issues a full FRMS implementation approval, CASA must be satisfied that the AOC holder's FRMS:
- (a) comprises all the elements mentioned in subclause 1.2; and
  - (b) is a safe, integrated, data-driven, system which will continuously and effectively monitor and manage fatigue-related safety risks using scientific principles and knowledge, and operational experience; and
  - (c) will enable the AOC holder to ensure that FCMs and other relevant personnel perform at levels of alertness sufficient to ensure the safety of operations.

### **2      FRMS policy and documentation**

- 2.1 The AOC holder must have an FRMS policy:
- (a) referring to all elements of the FRMS mentioned in subclause 1.2; and
  - (b) if the AOC holder has an SMS — which integrates the FRMS with the SMS.

- 2.2 The policy must require that all operations to which the FRMS applies be clearly defined in the operations manual.
- 2.3 The policy must:
- (a) make it clear that while primary responsibility for the FRMS lies with the AOC holder, its effective implementation requires shared responsibility by management, FCMs, and other relevant personnel; and
  - (b) clearly indicate the safety objectives of the FRMS; and
  - (c) be approved in writing by the Chief Executive Officer; and
  - (d) be accessible to all relevant areas and levels of the organisation in a way that indicates the AOC holder's specific endorsement of the policy; and
  - (e) declare management commitment to:
    - (i) effective safety reporting; and
    - (ii) provision of adequate resources for the FRMS; and
    - (iii) continuous improvement of the FRMS; and
  - (f) require that clear lines of accountability are identified for management, FCMs, and all other relevant personnel; and
  - (g) require periodic reviews to ensure the policy remains relevant and appropriate.
- 2.4 The policy must:
- (a) be in a written statement; and
  - (b) require that each other element of the FRMS mentioned in subclause 1.2 be described in a written statement.
- 2.5 In addition to the requirements under subclause 2.4, and the relevant limits and procedures contained in the operations manual in accordance with this CAO, the FRMS must also be supported by the following documentation, namely, up-to-date identification, description and records of the following:
- (a) the personnel accountabilities, responsibilities and authorities for effective implementation of the FRMS, including the FRMS Manager;
  - (b) the mechanisms for ongoing involvement in fatigue risk management of management, FCMs, and all other relevant personnel;
  - (c) the FRMS training programs, training requirements and records of attendance at training;
  - (d) scheduled and actual flight times, and duty periods and off-duty periods with significant deviations and reasons for deviations noted;
  - (e) the FRMS outputs, including findings from collected data, and recommendations and actions taken.
- 2.6 For paragraph 215 (3) (a) of CAR, an AOC holder's FRMS must form part of the holder's operations manual.
- Note* As part of the operations manual, the FRMS may be the subject of directions from CASA under subregulation 215 (3) of CAR.

### **3 FRMS practical operating procedures**

- 3.1 The FRMS practical operating procedures must, as a minimum:
- (a) incorporate scientific principles and knowledge; and
  - (b) identify, on an ongoing basis, fatigue-related safety hazards and the risks that result from them; and

- (c) ensure that remedial actions necessary to effectively mitigate the risks associated with the hazards are implemented properly; and
  - (d) provide for continuous recording and monitoring of, and regular assessment of:
    - (i) fatigue-related safety hazards; and
    - (ii) relevant remedial actions; and
    - (iii) the extent to which mitigation of fatigue-related risks is achieved by remedial actions; and
  - (e) provide for continuous improvement in the effectiveness of the FRMS.
- 3.2 The FRMS practical operating procedures must set out:
- (a) maximum values for each FCM for the following:
    - (i) flight times;
    - (ii) flight duty periods;
    - (iii) duty periods; and
  - (b) minimum values for each FCM off-duty periods.

*Note* The terms *flight time*, *flight duty period*, *duty period* and *off-duty period* are defined in this CAO.

- 3.3 For subclause 3.2, the values for each FCM must be based on scientific principles and knowledge and subject to safety assurance processes.
- 3.4 Subject to subclause 3.5, where an AOC holder acquires data from an FRMS which indicates that the maximum and minimum values required under paragraphs 3.2 (a) and (b) are too high or too low, respectively, the AOC holder must amend the FRMS to ensure that these values are acceptable.
- 3.5 For subclause 3.4, an amendment may only be made in accordance with clause 7.

#### **4 FRMS hazard identification, risk assessment and mitigation procedures**

##### FRMS hazard identification procedures

- 4.1 FRMS hazard identification procedures must be based on the following processes for fatigue-related hazard identification:
- (a) the predictive process;
  - (b) the proactive process;
  - (c) the reactive process.
- 4.2 The predictive process must be capable of identifying fatigue-related hazards by examining FCM scheduling and taking into account the following:
- (a) factors known to affect sleep;
  - (b) factors known to affect fatigue;
  - (c) the effects of the factors mentioned in paragraphs (a) and (b) on FCM performance.
- 4.3 The proactive process must be capable of identifying fatigue-related hazards within current flight operations.
- 4.4 The reactive process must be capable of identifying the contribution of fatigue-related hazards to actual events that could have affected, or did affect, safety, with a view to determining how the effects of fatigue on each event could have been minimised.

## FRMS risk assessment procedures

- 4.5 FRMS risk assessment procedures must be capable of determining the following:
- (a) the probability of events occurring or circumstances arising that create a fatigue-related hazard;
  - (b) the potential severity of fatigue-related hazards;
  - (c) when the safety risks associated with paragraph (a) or (b) require mitigation.
- 4.6 For subclause 4.5, the FRMS risk assessment procedures must ensure that identified fatigue-related hazards are examined in relation to the following:
- (a) the relevant operational context and procedures in which the identified fatigue-related hazard arose;
  - (b) the probability of the fatigue-related hazard arising in those circumstances;
  - (c) the possible consequences of the fatigue-related hazard in those circumstances;
  - (d) the effectiveness of existing safety procedures and controls.

## FRMS risk mitigation procedures

- 4.7 FRMS risk mitigation procedures for each fatigue-related hazards must be capable of:
- (a) selecting appropriate mitigation strategies for the hazard; and
  - (b) implementing the selected mitigation strategies; and
  - (c) monitoring the implementation and effectiveness of the strategies.

## 5 FRMS safety assurance procedures

- 5.1 FRMS safety assurance procedures must provide for:
- (a) continuous monitoring of the performance of the FRMS;
  - (b) the analysis of fatigue-related trends;
  - (c) measurements to validate the effectiveness of mitigation strategies.
- 5.2 FRMS safety assurance procedures must include a formal process for the management of changes to the FRMS arising from the following:
- (a) identification of changes in the operational environment that may affect FRMS;
  - (b) identification of changes within the AOC holder's organisation that may affect FRMS.
- 5.3 The FRMS safety assurance procedures must include a formal process to assess:
- (a) what impact a change mentioned in paragraph 5.2 (a) or (b) may have on the effective performance of the FRMS; and
  - (b) for such a change — what amendment, change or modification may be needed to the FRMS to ensure its continued effective performance.
- 5.4 FRMS safety assurance procedures must provide for the continuous improvement of the FRMS, by including the following:
- (a) the elimination or modification of fatigue-related risk controls that:
    - (i) have had unintended negative consequences; or
    - (ii) are no longer required because of changes in the AOC holder's operational or organisational environment;
  - (b) routine evaluations of facilities, equipment, documentation and procedures to determine their implications for fatigue-related risk management and control;

- (c) identification of emerging fatigue-related risks to allow the introduction of new procedures and procedures to mitigate such risks.

## **6 FRMS safety promotion procedures**

- 6.1 FRMS safety promotion procedures for fatigue-related hazards must include training and communication programs capable of supporting and continuously improving all elements of the FRMS in the delivery of optimum safety levels.
- 6.2 For subclause 6.1, FRMS safety promotion procedures must include the following:
  - (a) training programs for management, FCMs, and all other relevant personnel to ensure competency levels commensurate with the role and responsibility of the person under the FRMS;
  - (b) an effective FRMS communication plan that:
    - (i) explains all elements of the FRMS to management, FCMs, and all other relevant personnel; and
    - (ii) describes the communication channels which they must use to gather, disseminate and apply FRMS-related information.

## **7 FRMS change management procedures**

- 7.1 For this clause, a *significant change* means:
  - (a) any increase to the values required under paragraph 3.2 (a); and
  - (b) any decrease to the values required under paragraph 3.2 (b); and
  - (c) any other change to any element of the FRMS that does not maintain or improve, or is not likely to maintain or improve, aviation safety.
- 7.2 The FRMS change management procedures must:
  - (a) meet the requirements of this clause; and
  - (b) clearly indicate how the AOC holder will amend, change or modify any element of the FRMS consistently with the requirements of this clause.
- 7.3 The change management procedures set out in this clause apply to:
  - (a) an AOC holder with a trial FRMS implementation approval; and
  - (b) an AOC holder with a full FRMS implementation approval.
- 7.4 After issuing an FRMS implementation approval, CASA may, in writing, direct an AOC holder to amend, change or modify the FRMS (including practices and documents), and the AOC holder must comply within the time specified by CASA in the direction.

*Note 1* A failure to comply may result in revocation of the FRMS implementation approval.

*Note 2* CASA's power to direct changes to an FRMS is an emergency power for safety purposes only. It does not relieve any approval holder of their own obligation to improve the performance of their FRMS where this is safe and practicable.
- 7.5 The AOC holder must not make a significant change to any element of the FRMS unless an application to make the change is approved in writing by CASA.
- 7.6 An application for approval of a significant change must:
  - (a) be in writing; and
  - (b) set out the change; and
  - (c) be accompanied by a copy of the part of the AOC holder's FRMS documentation affected by the change, clearly identifying the change.
- 7.7 A change to the FRMS that is not a significant change must be:
  - (a) made in accordance with the FRMS change management procedures; and

- (b) notified in writing to CASA within the following period after the change is made:
  - (i) 7 days;
  - (ii) either:
    - (A) if an AOC holder's approved SMS amendment process under Part 82 of the CAOs has a different CASA notification period for SMS amendments — the period specified in the process; or
    - (B) if an AOC holder's exposition change process under the Regulations has a different CASA notification period for non-significant changes — the period specified in the process.

## **8 Trial FRMS implementation approval**

- 8.1 CASA may, on written application, issue an AOC holder with a trial FRMS implementation approval for up to 24 months, if CASA is satisfied that each element of the AOC holder's FRMS:
  - (a) complies with and meets the requirements, attributes and characteristics of an FRMS under this Appendix; and
  - (b) is capable of delivering:
    - (i) identified safety outcomes; and
    - (ii) fatigue-risk data and reports; and
    - (iii) continuous improvement in the delivery of safety outcomes.
- 8.2 If an approval was issued under subclause 8.1, CASA may, by issuing a new trial FRMS implementation approval, extend the duration of the approval:
  - (a) on the written application of the AOC holder; or
  - (b) on CASA's own initiative if CASA considers that aviation safety requires a longer trial FRMS implementation approval period before a full FRMS implementation approval.

*Note* More than 1 extension is possible if CASA considers it appropriate and trial FRMS implementation approval status could, therefore, be required to last longer than 24 months.

## **9 Full FRMS implementation approval**

- 9.1 CASA may, on written application, issue an AOC holder with a full FRMS implementation approval, if the AOC holder:
  - (a) has held a trial FRMS implementation approval for at least 12 consecutive months; and
  - (b) satisfies CASA, through relevant data and reports, that the FRMS:
    - (i) is demonstrably delivering the safety outcomes expected when the trial FRMS implementation approval was given; and
    - (ii) is capable of delivering continuous improvement in the delivery of safety outcomes.
- 9.2 If, for this clause, CASA decides not to issue the AOC holder with a full FRMS implementation approval, the holder may apply again to CASA for a trial FRMS implementation approval and clauses 8 and 9 will apply according to their terms.
- 9.3 For paragraph 9.1 (a), a trial FRMS implementation approval is deemed to include such an approval issued under *Civil Aviation Order 48.1 Instrument 2013* as in force immediately before the commencement of this CAO.

**10 Expiry, suspension, revocation, surrender of FRMS implementation approval**

- 10.1 An FRMS implementation approval stops having effect if:
- (a) it expires, or it is suspended or revoked in writing by CASA; or
  - (b) the AOC holder tells CASA in writing that the holder wants to surrender the approval.
- 10.2 If the approval is revoked or surrendered, the AOC holder must return the approval instrument to CASA within 14 days.
- 10.3 CASA may revoke or suspend an approval if:
- (a) the AOC holder does not comply with the requirements of this CAO for implementation or use of an FRMS; or
  - (b) CASA considers that continued implementation or use of the FRMS would adversely affect aviation safety; or
  - (c) the AOC holder refuses CASA reasonable access to any information or records produced under or for the FRMS which CASA requests in writing for the purpose of assessing the effectiveness and safety of the FRMS; or
  - (d) for a revocation only — CASA wishes to reissue the approval in a varied form.
- 10.4 To avoid doubt, in this clause, reference to an *FRMS implementation approval* means a trial or full FRMS implementation approval, and includes the approval as varied by CASA.

## Notes to Civil Aviation Order 48.1

### Note 1

The Civil Aviation Order (in force under the *Civil Aviation Act 1988*, *Civil Aviation Regulations 1988* and *Civil Aviation Safety Regulations 1998*) as shown in this compilation comprises *Civil Aviation Order 48.1 Instrument 2019* amended as indicated in the Tables below.

#### Table of Orders

Year and number	Date of registration on FRL	Date of commencement	Application, saving or transitional provisions
CAO 48.1 Instrument 2019	15 August 2019 (F2019L01070)	2 September 2019 (see s. 2)	
CAO 48.1 Amdt. Instrument 2019 (No. 1)	18 November 2019 (F2019L01473)	18 November (see s. 2)	

#### Table of Amendments

ad. = added or inserted   am. = amended   rep. = repealed   rs. = repealed and substituted

Provision affected	How affected
subs. 5	am. F2019L01473
subs. 5A	ad. F2019L01473