

## **Explanatory Statement**

### **Civil Aviation Act 1988**

### **Civil Aviation Order 48.1 Amendment Instrument 2016 (No. 1)**

#### **Purpose**

The purpose of the *Civil Aviation Order 48.1 Amendment Instrument 2016 (No. 1)* (the **CAO amendment**) is to revise and refine *Civil Aviation Order 48.1 Instrument 2013* (the **new CAO 48.1**) in light of operational and other feedback received by CASA from the aviation industry on the implications and effects of new CAO 48.1 since its introduction in 2013.

#### **Legislation**

Because of its detail, the legislative basis for the CAO is set out in Appendix 1.

#### **Background**

The new CAO 48.1 was made on 28 March 2013 to set out new rules for fatigue management for flight crew members (**FCMs**). New CAO 48.1 commenced on 30 April 2013, with immediate effect for new AOC holders, delayed effect for existing (grandfathered) AOC holders, and a specified date of effect for grandfathered AOC holders who voluntarily elected to transition early to the new Order. Under the new CAO 48.1 (as later amended) all AOC holders must comply with the new rules from 1 May 2017.

Since 2013, the aviation industry has provided valuable feedback to CASA on the implications and effects of the new rules. This feedback has been sought and welcomed by CASA.

It has enabled CASA to refine its understanding of current industry fatigue risk management practices and, against that background, review and revise the limitations and requirements in new CAO 48.1.

In light of this, CASA has also been able to develop new sets of limitations tailored to specific sectors of the aviation industry, for example, balloon operations, medical transport operations, emergency service operations, daylight aerial work operations and flight training associated with aerial work.

Additionally, some provisions have been identified which have caused difficulties in interpretation or implementation, offering the opportunity for clarification.

#### **The CAO amendment**

CASA has made the CAO amendment to address all of these matters. More detailed explanations for the amendments are set out in Appendix 4. In this Explanatory Statement, the new CAO 48.1, as amended by the CAO amendment, is referred to as the **amended new CAO 48.1**.

#### **Legislation Act 2003 (the LA 2003)**

The CAO amendment is a legislative instrument under various requirements, as set out in Appendix 2.

### **Consultation**

CASA responded to industry feedback about the new CAO 48.1, by developing a range of proposed amendments in consultation with members of the joint CASA/Industry FRMS Working Group. CASA also worked directly with specific sectors of the aviation industry to develop sets of fatigue limitations tailored to their unique operating characteristics, for example, medical transport and emergency service operators, and ballooning operators. This gave rise to the development of additional appendices for inclusion in the amended new CAO 48.1 specifically for these sectors.

CASA published a Consultation Draft of proposed amendments to the new CAO 48.1 on 13 August 2015. There were 20 responses to this Consultation Draft which were generally supportive of the changes, and which highlighted further changes that would be of benefit to industry. CASA assessed these suggestions with a primary consideration being the safety of civil aviation, whilst also taking account any reduced impact that might flow from the changes. Where it was determined that additional changes would retain an acceptable level of safety (taking into account scientific fatigue principles and existing safe practices), CASA developed the suggestions into amendments.

On 24 March 2016, CASA published a supplementary Consultation Draft of proposed amendments to the new CAO 48.1 that included further changes. There were 11 responses to this Consultation Draft. Again, some responses highlighted some further areas where it was suggested the new CAO 48.1 could be modified. All responses were considered in detail. Some of the second tranche of suggestions have been addressed in the amended new CAO 48.1. However, some others require further study and will be evaluated in more detail during the post-implementation review of the amended new CAO 48.1.

### **Statement of Compatibility with Human Rights**

The Statement in Appendix 3 is prepared in accordance with Part 3 of the *Human Rights (Parliamentary Scrutiny) Act 2011*. It indicates that the CAO amendment is compatible with the human rights and freedoms recognised or declared in the international instruments listed in section 3 of the *Human Rights (Parliamentary Scrutiny) Act 2011*.

### **Office of Best Practice Regulation (OBPR)**

The Office of Best Practice Regulation assessed the proposed changes as minor and that no further analysis in the form of a Regulation Impact Statement was required (OBPR ID: 14395).

### **Making and commencement**

The CAO amendment has been made by the Director of Aviation Safety, on behalf of CASA, in accordance with subsection 73 (2) of the *Civil Aviation Act 1988* (the *Act*).

The CAO amendment commences on the day after registration but the various amendments it contains do not commenced until 1 May 2017. However, there is also provision for voluntary early opt-in to coverage by the amendments.

*[Civil Aviation Order 48.1 Amendment Instrument 2016 (No. 1)]*

## Legislation — legislative basis for CAO 48.1

Under section 27 of the Act, CASA may issue AOCs with respect to aircraft for the purpose of safety regulation. Under section 28 of the Act, CASA must issue the AOC if satisfied that the applicant can comply with the requirements of Australian civil aviation safety legislation.

Under paragraph 28BA (1) (b) of the Act, an AOC has effect subject to any conditions specified in the regulations or Civil Aviation Orders (the **CAOs**).

Additionally, under subsection 98 (4A) of the Act, CASA may issue CAOs, not inconsistent with the Act, in respect to any matter in relation to which regulations may be made for the purposes of, relevantly, section 28BA of the Act (conditions on AOCs).

Section 98 of the Act empowers the Governor-General to make regulations for the Act and the safety of air navigation. Under subsections 98 (5A) and (5AA) of the Act, the regulations may empower CASA to issue instruments in relation to matters affecting the safe navigation and operation of aircraft, which, if applicable to a class of persons, would be legislative instruments.

Under subregulation 5 (1) of the *Civil Aviation Regulations 1988 (CAR 1988)*, wherever CASA is empowered or required under the regulations to issue any direction, CASA may, unless the contrary intention appears, issue the direction in the CAOs. Under subregulation 5 (3), if a direction relating to a person is issued in the CAOs, the direction is taken to have been served on the person on the date on which the making of the Order is notified in the *Gazette*.

Under subregulation 5.55 (1) of CAR 1988, CASA may give directions to an aircraft operator or the holder of a flight crew licence about:

- (a) the number of hours that the holder may fly in any period as a member of the flight crew of an aircraft; and
- (b) the length of each tour of duty undertaken by the holder; and
- (c) the length of reserve time for the holder; and
- (d) the rest periods that must be taken by the holder; and
- (e) the circumstances in which the holder must not:
  - (i) fly as a member of the flight crew of an aircraft; or
  - (ii) perform any other duty associated with his or her employment; and
- (f) the circumstances in which an operator must not require the holder:
  - (i) to fly as a member of the flight crew of an aircraft; or
  - (ii) perform any other duty associated with the holder's employment.

Under subregulations 5.55 (2), (3) and (4), contravention of a direction is a strict liability offence (with a defence of reasonable excuse to be established under an evidential burden).

Regulation 5.55 of CAR 1988, and its substitute in regulation 210A (see below), is used as a head of power solely to facilitate the eventual repeal of CAO Part 48 and the individual CAOs within it, all of which were made under regulation 5.55 and, from 4 December 2013, are continued in force under regulation 210A by virtue of regulation 335 (see below). Regulation 5.55 was not used or required as a head of power for the making of the CAO which relies on the other heads of power mentioned for the instrument.

However, the *Civil Aviation Legislation Amendment Regulation 2013* (the **amendment regulation**) has certain possible affects which the CAO has addressed. Thus, item 5 in Schedule 2 of the amendment regulation, which commenced on 4 December 2013, had the effect (from that date) of repealing regulation 5.55 (as part of a larger repeal of Part 5) and inserting a new regulation 210A into CAR 1988, in effect remaking regulation 5.55 but in a modified form (item 18 in Schedule 2).

The amendment regulation also made regulation 335 of CAR 1988 which provides that a CAO made under regulation 5.55 and in force immediately before 4 December 2013 continues in force according to its terms “as if” it had been made on 4 December 2013 under regulation 210A (item 41 in Schedule 2).

Although not needed as a head of power for the making of the CAO, regulation 210A of CAR 1988 is included with the heads of power to support the eventual repeal of CAO Part 48 on 1 May 2017. Regulation 210A took effect on 4 December 2013.

Under subregulation 215 (3) of CAR 1988, CASA may give a direction:

- (a) requiring an operator to include particular information, procedures and instructions in the operations manual; or
- (b) requiring the operator to revise or vary the information, procedures and instructions contained in the operations manual.

Under subregulation 215 (3), an operator must not contravene a direction. Under subregulation 215 (4), a direction does not have effect in relation to a person until it has been served on the person (which, as noted above, may be effected through a Gazette notice for the CAO containing the direction).

Under subregulation 11.068 (1) of the *Civil Aviation Safety Regulations 1998* (**CASR 1998**), for subsection 98 (5A) of the Act, CASA may issue a legislative instrument that imposes a condition on a specified class of authorisations (including, by virtue of regulation 11.015, flight crew licences). Under subregulation 11.068 (2), the class of authorisations may include authorisations granted *before* the imposition of the condition. Under subregulation 11.068 (3), a condition imposed by a legislative instrument issued under subregulation (1) is taken to be a condition of *every* authorisation of the class mentioned in the instrument.

Under subsection 33 (3) of the *Acts Interpretation Act 1901*, where an Act confers a power to make, grant or issue any instrument of a legislative or administrative character the power shall be construed as including a power exercisable in the like manner and subject to the like conditions (if any) to repeal any such instrument. Subsection 33 (3) of the *Acts Interpretation Act 1901* is used, in association with regulation 210A of CAR 1988, solely for the purpose of repealing CAO Part 48.

### **Why the CAO is a legislative instrument**

First, under subregulation 5 (1) of CAR 1988, wherever CASA may issue a direction under the regulations, CASA may issue the direction in a CAO. Under subsections 98 (5) and 98 (5AAA) of the Act, where the regulations provide for certain instruments to be issued in the form of CAOs, such CAOs are legislative instruments. The CAO contains directions made under regulation 215 of CAR 1988. The CAO is, therefore, a legislative instrument and it is subject to registration, and tabling and disallowance in the Parliament, under sections 15G, and 38 and 42, of the LA 2003.

Secondly, subregulation 11.068 (1) of CASR 1998 expressly provides that the imposition of conditions on a class of authorisations (like flight crew licences) may be by means of a legislative instrument. The CAO imposes conditions on flight crew licences under subregulation 11.068 (1). The CAO is, therefore, a legislative instrument and it is subject to registration, and tabling and disallowance in the Parliament, under sections 15G, and 38 and 42, of the LA 2003.

Thirdly, paragraph 28BA (1) (b) of the Act provides that an AOC has effect subject to any conditions “specified in the [regulations or] Civil Aviation Orders”. By so providing, paragraph 28BA (1) (b) of the Act is considered to be a separate head of power for the making of relevant CAOs. The CAO imposes conditions on AOCs to which it applies. For subsection 8 (4) of the LA 2003, the definition of a legislative instrument, such an CAO is of a legislative character and is, therefore, a legislative instrument subject to registration, and tabling and disallowance in the Parliament, under sections 15G, and 38 and 42, of the LA 2003.

Fourthly, under paragraph 28BA (1) (b) of the Act, an AOC has effect subject to any conditions “specified in the regulations [or Civil Aviation Orders]”. Subsection 98 (4A) of the Act provides that CASA may issue CAOs with respect to any matter in relation to which regulations may be made for the purposes of section 28BA. The CAO imposes conditions on AOCs to which it applies. Under subsection 98 (4B) of the Act, a CAO issued under subsection 98 (4A) is stated to be a legislative instrument and is, therefore, subject to registration, and tabling and disallowance in the Parliament, under sections 15G, and 38 and 42, of the LA 2003.

The CAO is made under these various heads of power and is a legislative instrument.

## Statement of Compatibility with Human Rights

*Prepared in accordance with Part 3 of the  
Human Rights (Parliamentary Scrutiny) Act 2011*

### **Civil Aviation Order 48.1 Amendment Instrument 2016 (No. 1)**

This legislative instrument is compatible with the human rights and freedoms recognised or declared in the international instruments listed in section 3 of the *Human Rights (Parliamentary Scrutiny) Act 2011*.

#### **Overview of the legislative instrument**

The purpose of the *Civil Aviation Order 48.1 Amendment Instrument 2016 (No. 1)* is to revise and refine *Civil Aviation Order 48.1 Instrument 2013* (the **new CAO 48.1**) in light of operational and other feedback received by CASA from the aviation industry on the implications and effects of the new CAO 48.1 since its introduction in 2013. The instrument revises some of the previous fatigue risk management limitations and requirements, and includes new sets of limitations tailored to specific sectors of the aviation industry, for example, balloon operations, medical transport operations, emergency service operations, daylight aerial work operations and flight training associated with aerial work. Some provisions which have caused difficulties in interpretation or implementation, have been clarified.

#### **Human rights implications**

These safety standards and rules are compatible with the human rights and freedoms recognised or declared in the international instruments listed in section 3 of the *Human Rights (Parliamentary Scrutiny) Act 2011*. The instrument does not engage any of the applicable rights or freedoms.

#### **Conclusion**

This legislative instrument is compatible with human rights as it does not raise any human rights issues.

**Civil Aviation Safety Authority**

## Civil Aviation Order 48.1 Amendment Instrument 2016 (No. 1)

### 1 Name of instrument

Under this section, the instrument is named as the *Civil Aviation Order 48.1 Amendment Instrument 2016 (No. 1)*.

### 2 Commencement

Under this section, sections 1, 2, and 4 of the instrument commence on the day after registration. Section 3, which effectuates the range of amendments contained in Schedule 1, does not commence until 1 May 2017. However, section 4, a transitional provision enabling voluntary early opt-in to coverage by the amendments in Schedule 1, takes effect for a person so opting-in in accordance with section 4 (in effect, the date the person specifies).

### 3 Amendment of Civil Aviation Order 48.1 Instrument 2013

Under this section, Schedule 1 amends the *Civil Aviation Order 48.1 Instrument 2013*.

### 4 Early opting-in to the amendments

Under this section, an AOC holder or a Part 141 operator, who has already previously voluntarily opted-in to coverage under *CAO 48.1 Instrument 2013* (the *new CAO 48.1*), may elect to a voluntary early opt-in to coverage by the new CAO 48.1 *as amended* by the CAO amendment. A Note explains in general terms how new CAO 48.1, as amended (the *amended new CAO 48.1*), takes effect for AOC holders and Part 141 operators.

## Schedule 1 Amendments (by items)

### [1] Paragraph 4.3

This amendment is intended to remove any doubt about the applicability of the 31 October 2016 deadline for transitional AOC holders to have taken specified steps for the 1 May 2017 application of the amended new CAO 48.1, namely, to have given CASA a copy of the draft amendments to be made to the operations manual for the holder to comply with this Order, or a completed CASA Form 824B for approval of a fatigue risk management system.

### [2] Paragraph 4B.2

This amendment is intended to remove any doubt about the applicability of the 31 October 2016 deadline for grandfathered Part 141 operators to have taken specified steps for the 1 May 2017 application of the amended new CAO 48.1, namely, to have given CASA a copy of the draft amendments to be made to the operations manual for the holder to comply with this Order, or a completed CASA Form 824B for approval of a fatigue risk management system.

### [3] Paragraph 5.1, the Note

The Note is revised consequential on item [25].

### [4] Subparagraph 5.2 (b), the Note

The Note is revised consequential on item [25].

- [5] **Paragraph 6.1, definition of AOC, the Note**  
The Note is revised consequential on item [25].
- [6] **Paragraph 6.1, definition of *crew rest facility*, the chapeau**  
The definition of *crew rest facility* is modified to make it clear that a crew rest facility must be fit for its purpose — that is, to enable an FCM to obtain sleep.
- [7] **Paragraph 6.1, definition of *cumulative flight time***  
The definition of *cumulative flight time* is replaced by one which makes it clear that cumulative flight time is only accrued by the FCM when acting as a crew member on board any aircraft, but excluding flight time accrued during recreational private operations. Therefore, flight time would not accrue when, for example, positioning, or otherwise not acting as a crew member.
- [8] **Paragraph 6.1, definition of *duty period***  
A Note is added to the existing definition of *duty period* to the effect that a duty period includes any time spent by the FCM in positioning as per the definition of *positioning* in subparagraph 6.2 (e).
- [9] **Paragraph 6.1, definition of *flight crew member*, the Note**  
The Note is revised consequential on the somewhat modified definition of FCM having been relocated to the CASR Dictionary.
- [10] **Paragraph 6.1, subparagraph (b) of the definition of *flight duty period* (or *FDP*), including the Note**  
The definition of *flight duty period* is modified to provide that a FDP ends at *the later of either* the completion of all duties associated with the flight or the last of a series of flights; or 15 minutes after the end of the flight, or the last of the series.
- [11] **Paragraph 6.1, definition of *flight time*, including the Note**  
The definition of *flight time* for an FCM is replaced to reflect the definition that was in subregulation 2 (1) of CAR 1988 before that definition was repealed. However, the definition is also modified so that flight time can only occur while the FCM is *acting as a crew member* on board an aircraft from first movement to take off until coming to rest after landing. A Note explains that thus, flight time for an FCM does not include the time he or she spends in positioning.
- [12] **Paragraph 6.1, definition of *multi-pilot operation***  
The definition of multi-pilot operation is replaced but only, in effect, to introduce the modification that it does not include flight training, contracted checking or contracted recurrent training unless the training or checking is conducted as a multi-crew operation.
- [13] **Paragraph 6.1, definition of *Part 141 certificate*, the Note**  
The Note is revised consequential on item [25].
- [14] **Paragraph 6.1, definition of *Part 141 operator*, the Note**  
The Note is revised consequential on item [25].



**[15] Paragraph 6.1, definition of *reporting time***

The definition of *reporting time* is replaced to mean the time assigned to an FCM to commence an FDP (rather than report for an FDP).

**[16] Paragraph 6.1, definition of *sector***

The definition of *sector* is replaced to clarify its 3 meanings: 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; for a rotorcraft — the period from when the rotor blades start turning until they stop turning and during which an FCM conducts 1 or more flights, each consisting of a take-off and a landing; each hour, or part of an hour, of an FDP spent in a synthetic training device.

**[17] Paragraph 6.1, definition of *split-duty rest period*, the *chapeau***

The definition of *split-duty rest period* is amended to modify its application for new Appendix 4B (medical transport operations and emergency service operations in the same way as already done for Appendix 5 (aerial work operations other than balloon flying training), by qualifying the requirement that the period be a pre-defined period of time.

**[18] Paragraph 6.1, subparagraph (b) of the definition of *standby***

The definition of *standby* is modified to include mention that during the period the FCM must be free from all duties associated with his or her employment. A Note explains that 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.

**[19] Paragraph 6.1, definition of *suitable sleeping accommodation***

The definition of *suitable sleeping accommodation* is modified to include mention that it must be fit for purpose for an FCM to obtain sleep, and that it must include a comfortable room, compartment or facility, and access to clean, tidy and hygienic amenities, including a toilet and hand washing basin.

**[20] Paragraph 6.1, definitions**

This amendment inserts a number of new definitions for:

*emergency service operation*

*fit for purpose*

*flight review*

*flight training*

*flight training associated with aerial work*

*local time*

*medical personnel*

*medical transport operation*

*medical transport tasker*

*mustering operation*

*operator proficiency check*

*single-pilot operation*; and

*standby-like arrangement*.

**[21] Subparagraph 6.2 (d)**

This amendment modifies the definition of *positioning* by adding a new requirement to what constitutes positioning, namely, that is duty and part of the duty period.

**[22] Paragraph 6.4, including the Note**

The paragraph is revised, consequential on item [25].

**[23] Subparagraph 7.1 (a)**

This amendment modifies the determination of “acclimatisation” by mentioning that the relevant location differs *in local time*.

**[24] Paragraph 7.2**

This amendment modifies the determination of “acclimatisation” by mentioning that the relevant location differs *in local time*.

**[25] Subsections 10, 11, 11A and 11B**

This amendment repeals subsections 10, 11, 11A and 11B for the application of particular appendices to particular operations and replaces them with a new section 10 for the limits and requirements for operations as set out in Table 10.1. Table 10.1 mentions in rows in column 1 the kinds of operations for which the Appendix in the corresponding row in column 2 applies.

Mention of 3 new appendices is added in the table — Appendix 4A for balloon operations, 4B for medical transport operations and emergency service operations, and 5A for daylight aerial work operations and flight training associated with aerial work. The availability of appendices for particular operations is also modified.

The key *changes* to the availability of appendices are as follows:

1. any multi-pilot operation (including, for example, aerial work operations) may be undertaken under Appendix 2 or 3;
2. any single-pilot operation (including, for example, aerial work operations) may be undertaken under Appendix 4;
3. any ballooning operations may be undertaken under a new Appendix 4A;
4. any medical transport and emergency service operations (and associated flight training and checking) may be undertaken under a new Appendix 4B;
5. any flight training and checking associated with an aerial work operation may be undertaken under Appendix 5;
6. any aerial work operations (and associated flight training and checking) conducted during daylight hours may be undertaken under a new Appendix 5A.

An AOC holder must choose at least 1 from the new list of appendices (1, 2, 3, 4, 4A, 5, 5A, 6 or 7) for his or her kind of operations. The holder must comply with the limits and requirements for FCMs mentioned in the chosen appendix or appendices and record the choice(s) in their operations manual.

A Note explains that a reference to an AOC holder is taken here to include a reference to a Part 141 operator. A second Note explains that the limits and requirements under subsection 10 apply only to aircraft operations, and not to flight training in a flight simulation training device.

An FCM must also comply with the limits and requirements for FCMs mentioned in the chosen appendix or appendices.

However, subsection 10 does not apply to a Part 141 operator, or a Part 142 operator, or their FCMs if the authorised Part 141 flight training or Part 142 activity is conducted in a flight simulation training device as the exclusive form of training or activity by the operator under the authorisation.

**[26] Subsection 12, including the Note**

Under this amendment, subject to certain qualifications, the amended new CAO 48.1 does not apply to an AOC holder or FCM when conducting private operations.

A Note explains that the obligation on an FCM under paragraph 16.1, to comply with the relevant flight and duty requirements, 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 48-1. CASA recommends that FCMs engaged in private operations consider this guidance in determining self-prescribed limits.

The qualifications apply if an FCM *performs duty* by conducting a private operation during an FDP that involves a commercial flight.

Thus, if the private flight is conducted *before or between* any commercial flight, 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.

If only 1 commercial flight is conducted during the FDP and 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.

If more than 1 commercial flight is conducted during the FDP and 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.

**[27] Paragraph 13.1, the chapeau**

The paragraph is revised, consequential on item [25].

**[28] After subsection 13**

This amendment provides for the days off duty that an FCM must have when transitioning from the application of Appendix 4B, 5 or 5A to his or her last FDP or standby, to the application of another Appendix (other than 4B, 5 or 5A) to his or her next FDP or standby.

**[29] Paragraph 14.5**

This amendment modifies an AOC holder's "Meals" obligations to an FCM by providing that it does not apply in respect of operations under Appendix 7 (an approved FRMS as opposed to under a relevant appendix). A Note explains that 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.

**[30] Subparagraph 14.6 (b)**

This amendment clarifies an AOC holder's obligation to maintain records, by including express mention of actual duty periods and actual flight times of each FCM when acting in the capacity of a crew member. A Note explains that thus, the flight time record does not include time spent positioning.

**[31] Paragraph 14.7**

This amendment modifies the records retention time from 10 years to 5 years.

**[32] Subparagraph 14.8 (b)**

This amendment modifies the obligation to give CASA records of extensions of FDPs or flight time limits so that they must be given promptly when so requested in writing, rather than automatically within 14 days of an extension.

**[33] Paragraph 14.9**

This amendment is consequential on items 32 and 134 so that records of extensions of FDP limits under Appendix 5 may be requested by CASA in accordance with subparagraph 14.8 (b).

**[34] Paragraph 14.10, including the Note**

This amendment clarifies the drafting of paragraph 14.10 concerning the determination of home base, and makes the paragraph subject to paragraph 14.10A.

**[35] After paragraph 14.10**

Under this amendment, paragraph 14.10 about home base determinations 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.

**[36] Paragraph 15.1**

This amendment has the effect of extending the additional AOC holder obligations to an AOC holder to whom 1 or more of new Appendices 4A, 4B, and 5A applies. (The additional AOC holder obligations already apply in relation to Appendices 2, 3, 4, 5 and 6.)

**[37] Sub-subparagraphs 15.2 (d) (i) and (ii)**

Under this amendment, where the AOC holder undertakes operations under multiple appendices, the holder's operations manual must set out procedures to ensure that transitions between the different limits of the appendices are undertaken in accordance with new subsection 13A (as well as existing subsection 13), and that such transitions do not adversely affect aviation safety.

**[38] Paragraph 15.3**

This amendment makes paragraph 15.3 (AOC holder additional obligation in relation to certain training) subject to new subsection 15A in item [42].

**[39] Subparagraph 15.6 (b)**

This amendment modifies subparagraph 15.5 (b) (AOC holder additional obligation in relation to recurrent training) in effect, to add that the recurrent training must 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.

**[40] Paragraph 15.7**

This amendment makes paragraph 15.7 (FCM's obligation to attend initial and recurrent training) subject to new subsection 15A in item [42].

**[41] Paragraph 15.9, including the Note**

This amendment modifies the FCM training and assessment records retention time from 10 years to at least 12 months after the FCM ceases to be employed by the AOC holder.

**[42] After subsection 15**

This amendment inserts new subsection 15A to provide for recognition of prior initial training (recognition of prior learning or *RPL*) of an AOC holder's new FCM. Thus, an AOC holder's additional obligations, under paragraphs 15.3 and 15.7, to deliver initial training to a new FCM do not apply if the new FCM has successfully completed initial training with a different AOC holder or its training agent, or with the same AOC holder when it previously employed the FCM, or with a registered training organisation capable of delivering initial training. However, a series of conditions must be met.

In particular, the prior initial training must have been completed within the currency time immediately before the new FCM becomes employed by the current AOC holder, that is, within the period of time that is the appropriate interval at which an AOC holder requires recurrent training to occur.

Based on authentic records, the current AOC holder must be satisfied that the RPL and the FCM complied with legislative requirements.

Within 4 weeks of the new FCM being employed by the current AOC holder, the new FCM must have successfully completed an induction course to inform him or her of any fatigue-related risks and information that are specific to the current AOC holder.

**[43] Paragraphs 16.1 and 16.2**

This amendment modifies FCM fatigue obligations so that the FCM must not operate an aircraft if objectively "a reasonable person in the FCM's position" would consider that fatigue may affect the safety of the operation. Two Notes provides expanded guidance on how an FCM should utilise off-duty periods, adaptation periods and, for augmented crew operations, in-flight rest opportunities, to manage fatigue risks.

The amendment also makes reporting of "adverse matters" an FCM licence condition, such matters being any matter that a reasonable person in the FCM's position would consider likely to adversely affect his or her ability to meet the AOC holder's fatigue risk management policies, or the limits and requirements of the Appendix or Appendices that the holder has chosen to apply to the FCM.

**[44] Appendix 1, clause 2**

Under this amendment changes are made to FDP and flight time limits under Appendix 1. One key change is that FDPs may be assigned between the beginning of morning civil twilight (or 0700 hours if that is earlier) and 0100 hours local time the following day. Another is that if an FCM is assigned

an FDP that commences before 0600 hours local time, or after 1400 hours local time, the FDP restricted to 8 hours. A third introduces a maximum of 3 per week for FDPs that finish after 2200 hours local time.

**[45] Appendix 1, subclause 3.1, the chapeau**

This amendment is consequential on item [44].

**[46] Appendix 1, paragraph 3.1 (d)**

Under this amendment, an FDP under Appendix 1 may be extended by up to 1 hour only if after it has been extended, it will finish no later than 0100 hours local time.

**[47] Appendix 1, subclause 3.2, the chapeau**

This amendment is consequential on item [44].

**[48] Appendix 1, after subclause 3.2**

Under this amendment, despite other limits under clauses 3 and 5, if unforeseen operational circumstances occur after take-off on the final sector of an FDP under Appendix 1, the flight may continue to the planned destination or alternate at the discretion of the pilot in command.

**[49] Appendix 1, clause 4**

This amendment revises the off-duty period requirements under Appendix 1. Subclause 4.2 is amended by providing for a minimum of 36 hours off-duty, including 2 local nights in the 168 hours before the commencement of the FDP (in line with other Appendices), as well as at least 7 days off-duty in the 28 consecutive days before an FDP commences.

Also, an FCM whose next FDP is to be conducted *under a different appendix must* have an off-duty period of at least 12 hours before conducting the next FDP.

**[50] Appendix 2, the title**

This amendment is consequential on item [25].

**[51] Appendix 2, subclause 1.1**

This item amends the sleep opportunity clauses in Appendix 2 for when an FCM is at home base. The 8 hours' sleep opportunity must be within the 10 hours before a standby period commences. If an FDP has been delayed by a single delay of more than 10 hours, the 8 hours' sleep opportunity must be within the 10 hours before commencing the FDP following the delay.

**[52] Appendix 2, subclause 1.2**

This item amends the sleep opportunity clauses in Appendix 2 for when an FCM is away from home base. The 8 hours' sleep opportunity must be within the 12 hours before a standby period commences. If an FDP has been delayed by a single delay of more than 10 hours, the 8 hours' sleep opportunity must be within the 12 hours before commencing the FDP following the delay.

**[53] Appendix 2, clause 2, Table 2.1**

This amendment modifies Table 2.1 of Appendix 2 by adjusting the FDP limit for a 7+ sector FDP commencing between 0600 and 0659 acclimatised time, to 9.5 hours.

**[54] Appendix 2, subclause 4.2**

This amendment makes a minor drafting change (“50%” of 4 hours expressed as 2 hours).

**[55] Appendix 2, subclause 4.3**

This amendment provides that (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.

**[56] Appendix 2, paragraphs 4.4 (a) and (b) (second occurring)**

This item adds a requirement that if a split-duty rest period under Appendix 2 includes any period between the hours of 2300 to 0529, the reduction in subsequent off-duty period and cumulative duty time, provided for in subclause 4.2, does not apply.

**[56A] Appendix 2, subclauses 5.1 and 5.2**

These subclauses clarify the drafting of subclauses 5.1 and 5.2 without changing the original intent.

**[57] Appendix 2, paragraph 5.3 (b), including the Note**

This amendment clarifies intent by providing that the FCMs at the end of an FDP for an augmented crew operation must be the same as the FCMs who commenced the first sector of the FDP.

**[58] Appendix 2, paragraph 5.3 (c)**

This amendment makes a drafting clarification.

**[59] Appendix 2, subparagraph 5.3 (f) (ii)**

This item provides an alternative to meet the subparagraph 5.3 (f) (ii) conditions for use of Table 5.1 for an augmented crew operation with an FDP in excess of 14 hours where 2 sectors are assigned. Thus, as an alternative to the existing option of scheduled flight time of the second sector being at least 9 hours, the FCMs landing the aircraft at the end of the second sector may have an in-flight crew rest period (during that sector) of at least 2 hours within 8 hours before the landing.

**[60] Appendix 2, paragraph 6.2 (c)**

This item clarifies that any Appendix may be applied after an off-duty period following a delay.

**[61] Appendix 2, paragraph 6.6 (b)**

This amendment changes the minimum time that an AOC holder may delay notifying an FCM of his or her reporting time when away from home base under Appendix 2 (if the AOC holder has procedures for delayed reporting time). The minimum time is changed to 1 hour before the FCM would normally have had to leave his or her accommodation in order to report in a timely way. For example, this would be 1 hour before the bus leaves from the hotel to go to the airport. This is consistent with the change to the definition of “reporting time” and, therefore, of minimal impact.

- [62] Appendix 2, paragraph 6.10 (b)**  
This item clarifies that any Appendix may be applied after an off-duty period following a delay.
- [63] Appendix 2, subclause 6.11**  
This amendment is consequential on item [65].
- [64] Appendix 2, subclause 6.12**  
This amendment is consequential on item [65].
- [65] Appendix 2, after subclause 6.12**  
Under this amendment, the maximum combined duration of 1 or more delays, with the immediately following FDP, is capped at 16 hours for Appendix 2 unless the FDP is an augmented crew operation or contains a split-duty rest period. Although an FCM is not suddenly, as it were, in an unsafe fatigued state after being awake for 16 hours, human fatigue science suggests that, from in or around the figures above 16 hours awake, the fatigue risk increases dramatically and becomes unacceptable for aviation safety.
- [66] Appendix 2, subclause 6.13**  
This item clarifies that any Appendix may be applied after an off-duty period following a delay.
- [67] Appendix 2, after subclause 6.13**  
This item defines the term “informed” for delayed reporting time under subclause 6.6 in Appendix 2 so that *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.
- [68] Appendix 2, after subclause 7.3**  
Under this amendment, before exercising the discretion under subclause 7.3 to extend the FDP limit of an FCM, the pilot in command must consult each FCM and be satisfied that each (including the pilot in command) considers himself or herself fit for the extension.
- [69] Appendix 2, clause 8, the title**  
This amendment is consequential on item [70].
- [70] Appendix 2, after subclause 8.3**  
This amendment (new subclause 8.4) is to remove any doubt that, under Appendix 2, standby-like arrangements (being available for duties but without access to suitable sleeping accommodation) must be treated as a duty period for the purposes of the amended new CAO 48.1. A Note explains that, 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.
- [71] Appendix 2, clause 9, including the Note**  
This amendment redrafts the positioning clause in Appendix 2. 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. A Note explains that, 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 of Appendix 2.

**[72] Appendix 2, subclause 10.1, the chapeau**

This amendment clarifies that, subject to subclause 10.2, if the sum of an FCM's FDP, and his or her duty time (if any) after completion of the FDP does not exceed 12 hours, his or her following off-duty period must be at least as specified in the remainder of the existing subclause 10.1.

**[73] Appendix 2, subclause 10.2, the chapeau**

This amendment clarifies that, if the sum of an FCM's FDP and his or her duty time (if any) after completion of the FDP does not exceed 10 hours, his or her following off-duty period may be reduced to not less than 9 hours provided the existing conditions in subclause 10.2 are met (relating to acclimatisation, local night, home base etc).

**[74] Appendix 2, subclause 10.3**

This amendment clarifies (subject to subclause 10.4), the duration of the off-duty period where the sum of an FCM's FDP and his or her duty time (if any) after completion of the FDP, exceeds 12 hours.

**[75] Appendix 2, subclause 13.2**

This amendment omits standby periods from inclusion in the calculation of the maximum of 4 assigned periods in any consecutive 168 hour period, where 3 or more FDPs involved late night operations. Previously, because standbys were included in the calculation, a standby period during which an FCM was actually called out to commence an FDP, would have been counted twice.

**[76] Appendix 2, subclause 13.2, the Note**

This amendment is consequential on item [75].

**[77] Appendix 2, after subclause 13.2**

Under this amendment, if, in any consecutive 168 hour period, an FCM is assigned 2 or more FDPs involving late night operations, and 1 or more FDPs in an unknown state of acclimatisation then the combined numerical total of FDPs must not exceed 4.

Previously, subclause 13.2, limiting late night operations, did not consider FDPs undertaken in an unknown state of acclimatisation. While there is a restriction on the number of consecutive FDPs in an unknown state of acclimatisation, there was no limitation on a mix of late night operations and FDPs in an unknown state of acclimatisation. The new subclause 13.2A deals with this combination of FDPs.

**[78] Appendix 3, the title**

This amendment is consequential on item [25].

**[79] Appendix 3, subclause 1.1**

This amendment amends the sleep opportunity requirements in Appendix 3 for when an FCM is at home base. The 8 hours' sleep opportunity must be within the 10 hours before a standby period commences. If an FDP has been delayed by a single delay of more than 10 hours, the 8 hours' sleep opportunity must be within the 10 hours before commencing the FDP following the delay.

**[80] Appendix 3, subclause 1.2**

This amendment amends the sleep opportunity requirements in Appendix 3 for when an FCM is away from home base. The 8 hours' sleep opportunity must be within the 12 hours before a standby period commences. If an FDP has been delayed by a single delay of more than 10 hours, the 8 hours' sleep opportunity must be within the 12 hours before commencing the FDP following the delay.

**[81] Appendix 3, clause 2, Table 2.1**

This amendment modifies Table 2.1 of Appendix 3 by adjusting the FDP limit for a 7+ sector FDP commencing between 0600 and 0659 acclimatised time, to 9.5 hours.

**[82] Appendix 3, subclause 3.2**

This amendment makes a minor drafting change ("50%" of 4 hours expressed as 2 hours).

**[83] Appendix 3, subclause 3.3**

This amendment provides that (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.

**[84] Appendix 3, paragraphs 3.4 (a) and (b)**

This item adds a requirement that if a split-duty rest period under Appendix 3 includes any period between the hours of 2300 to 0529, the reduction in subsequent off-duty period and cumulative duty time, provided for in subclause 3.2, does not apply.

**[85] Appendix 3, paragraph 4.2 (c)**

This amendment clarifies that any Appendix may be applied after an off-duty period following a delay.

**[86] Appendix 3, paragraph 4.6 (b)**

This amendment changes the minimum time that an AOC holder may delay notifying an FCM of his or her reporting time when away from home base under Appendix 3 (if the AOC holder has procedures for delayed reporting time). The minimum time is changed to 1 hour before the FCM would normally have had to leave his or her accommodation in order to report in a timely way. For example, this would be 1 hour before the bus leaves from the hotel to go to the airport. This is consistent with the change to the definition of "reporting time" and, therefore, of minimal impact.

**[87] Appendix 3, paragraph 4.10 (b)**

This amendment clarifies that any Appendix may be applied after an off-duty period following a delay.

**[88] Appendix 3, subclause 4.11**

This amendment is consequential on item [90].

**[89] Appendix 3, subclause 4.12**

This amendment is consequential on item [90].

**[90] Appendix 3, after subclause 4.12**

Under this amendment, the maximum combined duration of 1 or more delays, with the immediately following FDP, is capped at 16 hours for Appendix 3 unless the FDP is an augmented crew operation or contains a split-duty rest period. Although an FCM is not suddenly, as it were, in an unsafe fatigued state after being awake for 16 hours, human fatigue science suggests that, from in or around the figures above 16 hours awake, the fatigue risk increases dramatically and becomes unacceptable for aviation safety.

**[91] Appendix 3, subclause 4.13**

This amendment clarifies that any Appendix may be applied after an off-duty period following a delay.

**[92] Appendix 3, after subclause 4.13**

This item defines the term “informed” for delayed reporting time under subclause 4.6 in Appendix 3 so that *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.

**[93] Appendix 3, after subclause 5.3**

Under this amendment, before exercising the discretion under subclause 5.3 to extend the FDP limit of an FCM, the pilot in command must consult each FCM and be satisfied that each (including the pilot in command) considers himself or herself fit for the extension.

**[94] Appendix 3, clause 6, the title**

This amendment is consequential on item [95].

**[95] Appendix 3, after subclause 6.3**

This amendment (new subclause 6.4) is to remove any doubt that, under Appendix 3, standby-like arrangements (being available for duties but without access to suitable sleeping accommodation) must be treated as a duty period for the purposes of the amended new CAO 48.1. A Note explains that, 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.

**[96] Appendix 3, clause 7, including the Note**

This amendment redrafts the positioning clause in Appendix 3. 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. A Note explains that, 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 of Appendix 2.

**[97] Appendix 3, subclause 8.1, the chapeau**

This amendment clarifies that, subject to subclause 10.2, if the sum of an FCM’s FDP, and his or her duty time (if any) after completion of the FDP does not exceed 12 hours, his or her following off-duty period must be at least as specified in the remainder of the existing subclause 8.1.

**[98] Appendix 3, subclause 8.2, the chapeau**

This amendment clarifies that if the sum of an FCM's FDP, and his or her duty time (if any) after completion of the FDP does not exceed 10 hours, his or her following off-duty period may be reduced to not less than 9 hours provided the existing conditions in subclause 8.2 are met (relating to acclimatisation, local night, home base etc).

**[99] Appendix 3, subclause 8.3**

This amendment clarifies that, subject to subclause 8.4, if the sum of an FCM's FDP, and his or her duty time (if any) after completion of the FDP exceeds 12 hours, his or her following off-duty period must be at least the sum of 12 hours and 1.5 times the time that the FDP and the other duty time exceeded 12 hours.

**[100] Appendix 3, subclause 11.2**

This amendment omits standby periods from inclusion in the calculation of the maximum of 4 assigned periods in any consecutive 168 hour period, where 3 or more FDPs involved late night operations. Previously, because standbys were included in the calculation, a standby period during which an FCM was actually called out to commence an FDP, would have been counted twice.

**[101] Appendix 3, subclause 11.2, the Note**

This amendment is consequential on item [100].

**[102] Appendix 4, the title**

This amendment is consequential on item [25].

**[103] Appendix 4, subclause 1.1**

This amendment amends the sleep opportunity requirements in Appendix 4 for when an FCM is at home base. The 8 hours' sleep opportunity must be within the 10 hours before a standby period commences. If an FDP has been delayed by a single delay of more than 10 hours, the 8 hours' sleep opportunity must be within the 10 hours before commencing the FDP following the delay.

**[104] Appendix 4, subclause 1.2**

This amendment amends the sleep opportunity requirements in Appendix 4 for when an FCM is away from home base. The 8 hours' sleep opportunity must be within the 12 hours before a standby period commences. If an FDP has been delayed by a single delay of more than 10 hours, the 8 hours' sleep opportunity must be within the 12 hours before commencing the FDP following the delay.

**[105] Appendix 4, after subclause 2.2**

Under this amendment, 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.

**[106] Appendix 4, clause 2, Table 2.1**

Under this amendment, the specified local times at the start of an FDP are modified from 0500-0659 to 0500-0559; and from 0700-0759 to 0600-0759. The limits are also modified. The effect is that the FDP limit for FDPs commencing between 0600 and 0659 local time is modified from 9 to

10 hours. The flight time limit for FDPs commencing between 0600 and 0759 local time is modified from 8 to 9 hours. The flight time limit for FDPs commencing between 0600-0659 local time is also modified from 8 to 9 hours.

**[107] Appendix 4, subclause 3.2**

This amendment makes a minor drafting change (“50%” of 4 hours expressed as 2 hours).

**[108] Appendix 4, subclause 3.3**

This amendment provides that (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.

**[109] Appendix 4, paragraphs 3.4 (a) and (b)**

This item adds a requirement that if a split-duty rest period under Appendix 4 includes any period between the hours of 2300 to 0529, the reduction in subsequent off-duty period and cumulative duty time, provided for in subclause 3.2, does not apply.

**[110] Appendix 4, paragraph 4.2 (c)**

This amendment clarifies that any Appendix may be applied after an off-duty period following a delay.

**[111] Appendix 4, paragraph 4.10 (b)**

This amendment clarifies that any Appendix may be applied after an off-duty period following a delay.

**[112] Appendix 4, subclause 4.11**

This amendment is consequential on item [114].

**[113] Appendix 4, subclause 4.12**

This amendment is consequential on item [114].

**[114] Appendix 4, after subclause 4.12**

Under this amendment (subclause 4.12A), the maximum combined duration of 1 or more delays, with the immediately following FDP, is capped at 16 hours for Appendix 4 unless the FDP is an augmented crew operation or contains a split-duty rest period. Although an FCM is not suddenly, as it were, in an unsafe fatigued state after being awake for 16 hours, human fatigue science suggests that, from in or around the figures above 16 hours awake, the fatigue risk increases dramatically and becomes unacceptable for aviation safety.

**[115] Appendix 4, subclause 4.13**

This amendment clarifies that any Appendix may be applied after an off-duty period following a delay.

**[116] Appendix 4, after subclause 4.13**

This item defines the term “informed” for delayed reporting time under subclause 6.6 in Appendix 4 so that *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.

**[117] Appendix 4, after subclause 5.3**

Under this amendment, 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.

**[118] Appendix 4, clause 6, the title**

This amendment is consequential on item [95].

**[119] Appendix 4, after subclause 6.3**

This amendment (new subclause 6.4) is to remove any doubt that, under Appendix 4, standby-like arrangements (being available for duties but without access to suitable sleeping accommodation) must be treated as a duty period for the purposes of the amended new CAO 48.1. A Note explains that, 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.

**[120] Appendix 4, clause 7, including the Note**

This amendment redrafts the positioning clause in Appendix 4. 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. A Note explains that, 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 of Appendix 4.

**[121] Appendix 4, subclause 8.1, the chapeau**

This amendment clarifies that, subject to subclause 8.2, if the sum of an FCM's FDP, and his or her duty time (if any) after completion of the FDP does not exceed 12 hours, his or her following off-duty period must be at least as specified in the remainder of the existing subclause 8.1.

**[122] Appendix 4, subclause 8.2, the chapeau**

This amendment clarifies that, if the sum of an FCM's FDP and his or her duty time (if any) after completion of the FDP does not exceed 10 hours, his or her following off-duty period may be reduced to not less than 9 hours provided the existing conditions in subclause 8.2 are met (relating to acclimatisation, local night, home base etc).

**[123] Appendix 4, subclause 8.3**

This amendment clarifies (subject to subclause 8.4) the duration of the off-duty period where the sum of an FCM's FDP and his or her duty time (if any) after completion of the FDP, exceeds 12 hours.

**[124] Appendix 4, subclauses 8.4 and 8.5**

This amendment is a machinery provision to renumber previous subclauses 8.4 and 8.5 as 8.5 and 8.6, respectively. The reference in the amendment in item 123 to "(subject to subclause 8.4)" then has effect in the context of the new subclause 8.4 in item 125.

**[125] Appendix 4, after subclause 8.3**

Under this amendment, if, after an FDP, the off-duty period calculated under clause 8 is more than 14 hours, the off-duty period may be reduced to not less than 14 hours in certain circumstances.

**[126] Appendix 4, subclause 11.2**

This amendment omits standby periods from inclusion in the calculation of the maximum of 4 assigned periods in any consecutive 168 hour period, where 3 or more FDPs involved late night operations. Previously, because standbys were included in the calculation, a standby period during which an FCM was actually called out to commence an FDP, would have been counted twice.

**[127] Appendix 4, subclause 11.2, the Note**

This amendment is consequential on item [126].

**[128] After Appendix 4 — new Appendix 4A — Balloon operations, and new Appendix 4B — Medical transport operations and emergency service operations**

This amendment inserts 2 new appendices.

First, a new Appendix 4A is inserted, setting out limits and restrictions for balloon operations. It deals with sleep opportunity before an FDP, FDP limits, increases in FDP limits by split duty, extensions of FDPs, off-duty periods, limits on cumulative flight time and limits on cumulative duty time.

Secondly, a new Appendix 4B is inserted, setting out limits and restrictions for medical transport operations and emergency service operations. This appendix has been developed in anticipation that medical transport operations will, under proposed amendments to CASR 1998, no longer be classified as aerial work and, hence, will no longer be able to operate under Appendix 5. It deals with FDP and flight time limits, increases in FDP limits by split duty, extensions of FDPs, stand-by, off-duty periods limits, limits on cumulative flight time, limits on cumulative duty time, limits on late night operations and maximum durations that must not be exceeded.

**[129] Appendix 5, the title**

This amendment is consequential on item [25].

**[130] Appendix 5, clause 1, the title, and subclause 1.1**

This amendment makes provision for FDP limits for multi-pilot operations, and also inserts a new limitation of 7 hours flight time when conducting flight training under Appendix 5.

**[131] Appendix 5, clause 1, Table 5.1**

This amendment inserts new FDP limits for multi-pilot aerial work operations under Appendix 5, taking into account the number of sectors in the FDP. The amendment also makes provision for an increase in the FDP limits subject to certain conditions.

**[132] Appendix 5, subclause 1.2**

The amendment provides for the maximum permissible duration of an FDP to be decreased, if in the 8 hours before commencing the FDP, the FCM is called out from standby for non-flying duties, and then resumes the standby, and then

is called out again to commence an FDP before the end of the resumed standby.

**[133] Appendix 5, subclause 2.2**

Under this amendment, where an FDP contains a split-duty rest period of at least 2 consecutive hours with access to suitable resting accommodation, the maximum FDP may be increased by half the duration of the split-duty rest period, provided the increase is not more than 2 hours.

**[134] Appendix 5, subclause 3.1, including the Note**

This amendment reduces the maximum permitted extension in Appendix 5 to 2 hours, and would insert a new condition for extensions that the pilot in command of the aircraft must consult with other FCMs (if a multi-pilot operation) and be satisfied that the FCMs are fit for the extension.

**[135] Appendix 5, subclause 3.2**

Under this amendment, for subclause 3.2 of Appendix 5 only the off-duty period following an extended FDP may be increased, and not the off-duty requirements in subclause 5.2.

**[136] Appendix 5, after subclause 3.3**

Under this amendment, an FDP limit must not be extended if it would cause an FCM to exceed the cumulative flight time limits in clause 6. However, despite other limits under clause 3, if unforeseen operational circumstances occur after take-off on the final sector of an FDP under Appendix 5, the flight may continue to the planned destination or alternate at the discretion of the pilot in command.

**[137] Appendix 5, clause 5**

Under this amendment, an off-duty period under Appendix 5 must provide an FCM with at least 8 hours' access to suitable sleeping accommodation. This amendment also recasts subclause 5.2 in a fashion consistent with the same subclause in other Appendices without changing the original intent.

**[138] Appendix 5, subclause 6.4**

Under this amendment, 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 (as opposed to the previous 7) consecutive days off-duty.

**[139] After Appendix 5 — new Appendix 5A — Daylight aerial work operations and flight training associated with aerial work**

The amendment inserts a new Appendix 5A setting out limits and restrictions for daylight only aerial work operations (for example, livestock mustering) and flight training associated with aerial work. It deals with sleep opportunity before an FDP, FDP and flight time limits, extensions of FDPs, off-duty period limits, limits on cumulative flight time and maximum durations that must not be exceeded.

**[140] Appendix 6, the title, including the Note**

This amendment is consequential on item [25].



**[141] Appendix 6, clause 2, Table 2.1**

This item amends Table 2.1 in Appendix 6 by adjusting the FDP limit for FDPs commencing between 0600 and 0659 local time to 10 hours (amended from 9 hours).

**[142] Appendix 6, subclause 3.2**

This amendment makes a minor drafting change (“50%” of 4 hours expressed as 2 hours).

**[143] Appendix 6, subclause 3.3**

This amendment provides that (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.

**[144] Appendix 6, paragraphs 3.4 (a) and (b)**

This item adds a requirement that if a split-duty rest period under Appendix 6 includes any period between the hours of 2300 to 0529, the reduction in subsequent off-duty period and cumulative duty time, provided for in subclause 3.2, does not apply.

**[145] Appendix 6, subclause 4.1**

Under this amendment, if an AOC holder reassigns a modified FDP to an FCM under Appendix 6, the modified FDP and flight time must not exceed the applicable limits in the holder’s operations manual. This requirement was inadvertently omitted from the new CAO 48.1.

**[146] Appendix 6, after subclause 4.3**

This amendment inserts a new condition for extensions under Appendix 6, namely, that the pilot in command of the aircraft must be satisfied that he or she is, and that any other FCMs are, fit for the extension.

**[147] Appendix 6, clause 5, the title**

The amendment is consequential on item [148].

**[148] Appendix 6, after subclause 5.3**

This amendment (new subclause 5.4) is to remove any doubt that, under Appendix 6, standby-like arrangements (being available for duties but without access to suitable sleeping accommodation) must be treated as a duty period for the purposes of the amended new CAO 48.1. A Note explains that, 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.

**[149] Appendix 6, clause 6, including the Note**

Under this amendment, clause 6 on positioning in Appendix 6 is redrafted to provide that on completion of assigned flight duties in an FDP, an FCM may position to a suitable location as required by the AOC holder. A Note is added to indicate that, 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 of the Appendix.

**[150] Appendix 6, subclause 7.1**

This amendment clarifies that, after an FCM's FDP and any duty time after completion of the FDP but before the following off-duty period, his or her following off-duty period must be at least the sum of 12 hours and 1.5 times the time that the FDP and the other duty time exceeded 12 hours.

**[151] Appendix 6, subclause 10.2**

This amendment omits standby periods from inclusion in the calculation of the maximum of 4 assigned periods in any consecutive 168 hour period, where 3 or more FDPs involved late night operations. Previously, because standbys were included in the calculation, a standby period during which an FCM was actually called out to commence an FDP, would have been counted twice.

**[152] Appendix 6, subclause 10.2, the Note**

This amendment is consequential on item [151].

**[153] Appendix 7, subclause 1.2, Note 2**

This amendment modifies Note 2 referring to FRMS development and implementation guidance.

**[154] Appendix 7, paragraph 1.4 (c)**

This amendment makes a grammatical improvement.

**[155] Appendix 7, after subclause 3.2**

Under this amendment, for subclause 3.2, the fatigue-related values for each FCM must be set out with reference to the applicable circumstances of each flight, flight duty period or duty period or off-duty period. A Note gives examples of the values: the local time at the start of the FDP; the acclimatised time at the start of the FDP; the number of sectors to be flown; the classes of crew rest facilities; the additional FCMs.