



**Australian Government**  
**Civil Aviation Safety Authority**

**Civil Aviation Order 82.5 (as amended)**

made under paragraph 28BA (1) (b) and subsection 98 (4A) of the *Civil Aviation Act 1988*.

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Prepared by the Legislative Drafting Section, Legal Branch, Legal Services Division, Civil Aviation Safety Authority, Canberra.

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**Section 82.5**

**Conditions on Air Operators' Certificates authorising regular public transport operations in high capacity aircraft**

**1A Interpretation**

A reference in this section to a regulation or subregulation identified by a number or a numerical code (for example, 92A or 218 (1)) is a reference to the regulation or

subregulation in the *Civil Aviation Regulations 1988* identified by that number or code.

## 1 Application of conditions

- 1.1 This section applies to certificates authorising regular public transport operations in high capacity aircraft.
- 1.2 For the purposes of paragraph 28BA (1) (b) of the Act, each certificate authorising regular public transport operations in high capacity aircraft is subject to the condition that the obligations set out in this section are complied with.
- 1.3 The condition and obligations set out in this section are in addition to the conditions set out in section 82.0.

## 2 Obligations in relation to organisation and facilities [see Table A]

2.1 Each operator must:

- (a) establish and maintain an appropriate organisation, with a sound and effective management structure that uses a safety management system approved by CASA; and

*Note* Guidance on what CASA will consider in deciding whether to approve an SMS is contained in the following (the *CAAP SMS package*):

- (a) CAAP SMS-1(0) — Safety Management Systems for Regular Public Transport Operations;
  - (b) CAAP SMS-2(0) — Integration of Human Factors (HF) into Safety Management Systems (SMS);
  - (c) CAAP SMS-3(0) — Human Factors and Non-Technical Skills Training for Regular Public Transport Operations.
- (b) make adequate provision for training and checking of personnel and the inspection and maintenance of aircraft; and
  - (c) have a program, approved by CASA, to train and assess personnel in human factors and non-technical skills with the aim of minimising human error.

*Note* The CAAP SMS package contains guidance on what CASA will consider in deciding whether to approve a program for human factors and non-technical skills training.

- 2.2 Each operator must employ such numbers of qualified personnel as CASA considers necessary to operate the services proposed by the operator and such personnel must be employed on a full-time basis in appropriate areas.
- 2.3 Each operator must provide and maintain facilities and documentation sufficient to enable the operator to conduct services with safety and in compliance with Appendix 1.
- 2.4 In this subsection:

**human factors** or **HF** means the minimisation of human error and its consequences by optimising the relationships within systems between people, activities and equipment.

**non-technical skills** means specific human competencies, including critical decision making, team communication, situational awareness and workload management, which may minimise human error in aviation.

**safety management system** or **SMS** has the meaning given in subsection 2A.

- 2.5 For its leased aircraft — the operator must provide details of the lease conditions to enable CASA to:
  - (a) assess the arrangements for operational control of the aircraft; and
  - (b) assess the arrangements for the maintenance of the aircraft; and
  - (c) ensure that the aircraft meets airworthiness requirements.

## 2A Safety management system

- 2A.1 For this Order, a *safety management system* or *SMS* is a systematic approach to managing safety that must:
- (a) include the organisational structures, accountabilities, policies and procedures necessary to manage safety in a systematic way; and
  - (b) comply with paragraph 2A.2.
- 2A.2 Subject to paragraph 2A.4, an SMS must, as a minimum, include the following:
- (a) a statement of the operator's safety policy and objectives, including documented details of the following:
    - (i) the management commitment to, and responsibility for, safety risk management;
    - (ii) the safety accountabilities of managers;
    - (iii) the appointment of key safety personnel;
    - (iv) the SMS implementation plan;
    - (v) the relevant third party relationships and interactions;
    - (vi) the coordination of the emergency response plan;
  - (b) a safety risk management plan, including documented details of the following:
    - (i) hazard identification processes;
    - (ii) risk assessment and mitigation processes;
  - (c) a safety assurance system, including documented details of the following:
    - (i) safety performance monitoring and measurement;
    - (ii) management of change;
    - (iii) continuous improvement of the SMS;
  - (d) a safety promotion system, including documented details of the following:
    - (i) training and education;
    - (ii) safety communication;
  - (e) for an operator who operates an aircraft with a maximum take-off weight exceeding 27 000 kg — a flight data analysis program (*FDAP*) in accordance with paragraph 2A.3.
- 2A.3 For subparagraph 2A.2 (e), a FDAP must:
- (a) regularly record and analyse the operational flight data of individual and aggregated operations to improve the safety of flight operations; and
  - (b) be integrated into the safety assurance system mentioned in subparagraph 2A.2 (c); and
  - (c) be supplied by:
    - (i) the operator; or
    - (ii) without in any way compromising the operator's responsibility for the existence and effectiveness of the FDAP — another appropriate person; and
  - (d) ensure that:
    - (i) except with the person's written consent or by a court order — the identity of a person who reports data to the program is protected from disclosure to anyone other than a person whose duty requires him or her to analyse operational flight data and who, therefore, has access to identity information solely for that purpose; and

- (ii) no punitive action may be taken by the operator against a person who reports data.

- 2A.4 An SMS approved by CASA under subparagraph 2.1 (a) may only be amended in accordance with subsection 2B.
- 2A.5 An SMS may have a process for the amendment of the SMS in accordance with subsection 2B.

*Note* Under paragraph 2.4, SMS has the meaning given in subsection 2A and includes the documents mentioned in subsection 2A.

## **2B SMS amendment process**

- 2B.1 In this subsection:

***SMS amendment process*** is a process within an SMS for amendment of the SMS, or a specified part of the SMS, in accordance with this subsection.

*Note* The SMS amendment process can only be altered in accordance with subsection 2C.

- 2B.2 An operator, who does not have an SMS amendment process approved by CASA, must not amend the operator's approved SMS without CASA's approval.
- 2B.3 For paragraph 2B.2, CASA's approval may only be given in the form of a new SMS approval.
- 2B.4 If an operator has an SMS amendment process, it must be approved in writing by CASA at the time CASA approves the operator's SMS.
- 2B.5 An approved SMS amendment process must have the capacity to identify and record reliable information from which a reasoned and persuasive safety case may be developed to demonstrate whether or not a proposed amendment to the SMS is likely to:
  - (a) maintain at least the same level of safety as that which exists under the SMS at the time of the proposed amendment; or
  - (b) increase the level of safety above that which exists under the SMS at the time of the proposed amendment.
- 2B.6 Subject to paragraph 2B.10, if an operator has an approved SMS amendment process, the operator may, without CASA's approval, make a proposed amendment to the operator's SMS, but only if:
  - (a) the proposed amendment is:
    - (i) merely editorial; or
    - (ii) such that no reasonable person could doubt that the proposed amendment increases the level of safety above that which exists under the SMS at the time of the proposed amendment; or
  - (b) a safety case, developed in the SMS amendment process, demonstrates that the proposed amendment is likely to:
    - (i) maintain at least the same level of safety as that which exists under the SMS at the time of the proposed amendment; or
    - (ii) increase the level of safety above that which exists under the SMS at the time of the proposed amendment.
- 2B.7 If an operator makes an amendment to the operator's SMS in accordance with this subsection, the amendment must not take effect until it is documented by being incorporated into every copy of the documents mentioned in subsection 2A used by the operator to which the amendment is relevant.
- 2B.8 If an operator makes an amendment to the operator's SMS in accordance with this subsection, the amendment must be notified in writing to CASA in accordance with a

procedure and timetable that must be set out in the operator's approved SMS amendment process.

- 2B.9 An approved SMS amendment process may itself only be altered in accordance with subsection 2C.
- 2B.10 An amendment to part of an SMS, on which an approved SMS amendment process directly depends in order to comply with paragraph 2B.5, is deemed to be an alteration of the SMS amendment process to which subsection 2C applies.

*Note* If, as part of its general capacity to demonstrate the safety of SMS amendments, the SMS amendment process *directly* depends on some feature of the SMS itself, a proposed amendment to that SMS feature would be considered an amendment of the SMS amendment process. Subsection 2C would, therefore, apply to the proposed amendment.

## **2C Alteration of an approved SMS amendment process**

- 2C.1 An operator with an approved SMS amendment process must not alter the process without CASA's written approval.
- 2C.2 For paragraph 2C.1, CASA's written approval may only be:
- (a) given on application; and
  - (b) in the form of an approval for an SMS containing a new SMS amendment process in accordance with subsection 2B.

## **2D HF&NTS training and assessment program amendments**

- 2D.1 In this subsection, and in subsections 2E and 2F:

**HF&NTS** means human factors and non-technical skills.

**HF&NTS program amendment process** means a process within an HF&NTS program for amendment of the program, or a specified part of the program, in accordance with subsection 2E.

*Note* The HF&NTS program amendment process can only be altered in accordance with subsection 2F.

**HF&NTS program** means an operator's program to train and assess the operator's personnel in HF&NTS and includes the operator's documents for the program.

- 2D.2 An HF&NTS program approved by CASA under subparagraph 2.1 (c) may only be amended in accordance with subsection 2E.
- 2D.3 An HF&NTS program may have an HF&NTS program amendment process for the program in accordance with subsection 2E.

## **2E HF&NTS program amendment process**

- 2E.1 An operator, who does not have an HF&NTS program amendment process approved by CASA, must not amend the operator's approved HF&NTS program without CASA's approval.
- 2E.2 For paragraph 2E.1, CASA's approval may only be given in the form of a new HF&NTS program approval.
- 2E.3 If an operator has an HF&NTS program amendment process, it must be approved in writing by CASA at the time CASA approves the operator's HF&NTS program.
- 2E.4 An approved HF&NTS program amendment process must have the capacity to identify and record reliable information from which a reasoned and persuasive safety case may be developed to demonstrate whether or not a proposed amendment to the HF&NTS program is likely to:
- (a) maintain at least the same level of safety as that which exists under the HF&NTS program at the time of the proposed amendment; or

- (b) increase the level of safety above that which exists under the HF&NTS program at the time of the proposed amendment.
- 2E.5 If an operator has an approved HF&NTS program amendment process, the operator may, without CASA's approval, make a proposed amendment to the operator's approved HF&NTS program but only if:
- (a) the proposed amendment is:
    - (i) merely editorial; or
    - (ii) such that no reasonable person could doubt that the proposed amendment increases the level of safety above that which exists under the SMS at the time of the proposed amendment; or
  - (b) a safety case developed in the HF&NTS program amendment process demonstrates that the proposed amendment is likely to:
    - (i) maintain at least the same level of safety as that which exists under the HF&NTS program at the time of the proposed amendment; or
    - (ii) increase the level of safety above that which exists under the HF&NTS program at the time of the proposed amendment.
- 2E.6 If an operator makes an amendment to the operator's approved HF&NTS program in accordance with this subsection, the amendment must not take effect until it is documented by being incorporated into every copy of the HF&NTS program documents used by the operator to which the amendment is relevant.
- 2E.7 If an operator makes an amendment to the operator's approved HF&NTS program in accordance with this subsection, the amendment must be notified in writing to CASA in accordance with a procedure and timetable that must be set out in the operator's approved HF&NTS program amendment process.
- 2E.8 An approved HF&NTS program amendment process may only be altered in accordance with subsection 2F.

## **2F Alteration of an approved HF&NTS program amendment process**

- 2F.1 An operator with an approved HF&NTS program amendment process must not alter the process without CASA's written approval.
- 2F.2 For paragraph 2F.2, CASA's written approval may only be:
- (a) given on application; and
  - (b) in the form of an approval for an HF&NTS program containing a new HF&NTS program amendment process in accordance with subsection 2E.

## **3 Obligations in relation to training and checking**

- 3.1 Each operator must provide a training and checking organisation under regulation 217.
- 3.2 A training and checking organisation must be in accordance with Appendix 2.
- 3.3 Each operator must ensure that a person does not act as an operating crew member on a scheduled revenue service unless that person has satisfactorily completed all necessary training programs and proficiency checks and has been certified by a check pilot as being competent to act as an operating crew member.
- 3.4 For the purposes of subregulations 215 (3) and (6), each operator must include in the operator's operations manual the information set out in Appendix 3 and must provide copies of the manual to all operating crew members employed by the operator.

#### **4 Obligations in relation to maintenance**

- 4.1 If Part 42 of the *Civil Aviation Safety Regulations 1998 (CASR 1998)* does not apply to an operator, the operator must provide a system of maintenance of aeroplanes and establish a system of maintenance control in accordance with the requirements of, or issued under, the *Civil Aviation Regulations 1988*.

*Note 1* Part 42 of CASR 1998 applies to all registered aircraft, subject to transitional provisions designed to transition operators over a 2 year period.

*Note 2* Commencing on 27 June 2011, subregulation 42.040 (1), with subregulation 202.180 (1), of CASR 1998, requires (*as a condition on the AOC*) that the operator of a registered aircraft authorised to operate under an AOC issued for a purpose mentioned in paragraph 206 (1) (c) of CAR 1988 (generally speaking, RPT), must be approved by CASA as a continuing airworthiness management organisation (a *CAMO*) for the type and model of the aircraft.

#### **4A Obligation to be registered operator**

- 4A.1 This subsection applies to each AOC holder approved by CASA to be a continuing airworthiness management organisation (a *CAMO*) under Subpart 42.G of CASR 1998.
- 4A.2 Unless CASA approves otherwise, the AOC holder must be the registered operator of each Australian aircraft that is authorised under the holder's AOC to operate for a purpose mentioned in paragraph 206 (1) (c) of CAR 1988.
- 4A.3 In this subsection:

*registered operator* means registered operator under Part 47 of CASR 1998.

#### **5 Obligations in relation to aerodromes**

- 5.1 An operator must conduct operations in accordance with regulation 92A.
- 5.2 An operator must ensure that night operations are only conducted from an aerodrome for which there is:
- (a) a published instrument approach procedure; and
  - (b) a serviceable and available navigation aid; and
  - (c) obstruction lighting where necessary.

*Note* A navigation aid includes GNSS.

- 5.3 Unless otherwise approved in writing by CASA and subject to paragraph 5.4, an operator must not permit turbo-jet aeroplanes to use runways that are not equipped with electronic or visual approach slope guidance.
- 5.4 Paragraph 5.3 does not apply to runways at nominated alternate aerodromes.

#### **5A Conditions in relation to communication services at non-controlled aerodromes**

- 5A.1 Subject to this subsection, an aircraft must not be operated within the terminal airspace of a non-controlled aerodrome unless:
- (a) there is a radiocommunication confirmation system for the aerodrome; and
  - (b) that radiocommunication confirmation system is in operation when the aircraft is within the terminal airspace.
- 5A.1A Paragraph 5A.1 does not apply if an aircraft is using an aerodrome as an alternate aerodrome.
- 5A.1B Paragraph 5A.1 does not apply to an aircraft that:
- (a) was scheduled to arrive at, or depart from, an aerodrome at a time when the aerodrome was not a non-controlled aerodrome; but

(b) has had its operation delayed so that, at the actual time of its arrival at, or its departure from, the aerodrome, the aerodrome is a non-controlled aerodrome.

5A.1C Paragraph 5A.1 does not apply in respect of a non-controlled aerodrome if CASA determines in writing that it is technically impracticable to provide a radiocommunication confirmation system for the aerodrome.

5A.2 If the radiocommunication confirmation system at a non-controlled aerodrome becomes unserviceable, paragraph 5A.1 does not apply in respect of that aerodrome for:

- (a) the period during which the system remains unserviceable; or
- (b) the period of 7 days commencing on the day on which the system becomes unserviceable;

whichever is shorter.

## **6 Obligations in relation to aeroplane certification and performance**

- 6.1 Each operator must ensure that operations are only conducted in aeroplanes that are certified in the Transport Category.
- 6.2 Each operator must ensure that such aeroplanes are operated in accordance with section 20.7.1B.

## **7 Obligations in relation to flight category and aeroplane requirements**

- 7.1 Unless otherwise approved in writing by CASA, each operator must conduct operations in multi-engined aeroplanes equipped for flight under the instrument flight rules (I.F.R.).
- 7.2 Subject to paragraphs 7.3, 7.4 and 7.5, unless otherwise approved in writing by CASA, each operator must conduct flights under the I.F.R.
- 7.3 An operator may conduct flights under the V.F.R. in Class E airspace, if:
  - (a) the flight is conducted in V.M.C.; and
  - (b) the pilot in command has, while in Class G airspace, requested air traffic control to follow I.F.R. pick-up procedures; and
  - (c) the pilot in command is awaiting an air traffic control clearance to operate under the I.F.R. in Class E airspace.
- 7.4 An operator and a pilot in command who conduct a flight under the V.F.R. in accordance with paragraph 7.3 must, if the aircraft is not climbing, ensure that it maintains an altitude appropriate to a flight under the V.F.R.
- 7.5 In all other respects, a flight to which paragraph 7.3 applies must be conducted as if it were a flight under the I.F.R.

## **8 Obligations in relation to flight crew**

- 8.1 Each operator must provide a minimum flight crew of 2 pilots or the number of pilots specified in the aircraft flight manual, whichever is the greater.
- 8.2 An operator must ensure that a pilot who holds a commercial pilot (aeroplane) licence or a multi-crew pilot (aeroplane) licence does not act as co-pilot of an aeroplane engaged in a high capacity regular public transport operation unless the pilot meets the recent experience requirements applicable to that pilot under paragraphs 11.5, 11.6 and 11.7 of section 40.1.5.



## **9 Obligations in relation to route and area qualifications**

- 9.1 Subject to paragraph 9.2, an operator must ensure that a pilot does not act as pilot in command of an aircraft engaged in a regular public transport service unless the pilot meets the requirements of subregulation 218 (1).
- 9.2 Where a pilot has completed an audio-visual briefing as set out in Appendix 2 in respect of a proposed flight, the pilot is to be taken to have met the requirements of subregulation 218 (1) in respect of the aerodrome or route which was the subject of the briefing, if the briefing occurs:
- (a) in the case of initial qualification for an aerodrome or route — within the period of 14 days immediately before the flight; or
  - (b) in the case of re-qualification — within the period of 35 days immediately before the flight.
- 9.3 Subject to paragraph 9.4 where, in respect of a flight, an aerodrome is nominated solely as an alternate, a pilot who has studied written briefing material about that aerodrome is exempt from the requirements of paragraphs 218 (1) (a) and (b) of the *Civil Aviation Regulations 1988* if the study takes place within 14 days immediately before the flight.
- 9.4 CASA may, in writing, determine that paragraph 9.3 does not apply in relation to a specified aerodrome.
- 9.5 Each operator must provide for the carriage of a CASA examiner on each inaugural flight to a destination not previously served by the operator.

## **9A Obligations in relation to international carriage of a copy of the AOC** [see Table A]

Each operator of an aircraft engaged in an international flight must ensure that the pilot in command can present a true and complete hard copy of the following documents to any person who has a lawful right to inspect them before, during or at the end of the flight:

- (a) the operator's current AOC; and
- (b) each operational specification (if any) issued in conjunction with the AOC that is relevant to the aircraft.

## **10 Obligations in relation to foreign registered aircraft**

- 10.1 This subsection applies to foreign registered aircraft only.
- 10.2 Subject to paragraphs 10.3 and 10.5, an operator who holds a certificate authorising the operation of a turbine engined aeroplane that:
- (a) has a maximum take-off weight of more than 15 000 kg; or
  - (b) is carrying 10 or more passengers;
- must ensure that the aeroplane is not operated under the I.F.R. in regular public transport operations unless it is fitted with a ground proximity warning system (GPWS) that meets the requirements of section 108.36.
- 10.3 Paragraph 10.2 does not apply to the operator if:
- (a) at any time before the aeroplane is operated under the I.F.R. in regular public transport operations, the holder of the certificate authorising the operation of the aeroplane has given to CASA an undertaking in an approved form that the aeroplane will, on or before 1 January 2001, be fitted with an approved GPWS that has a predictive terrain hazard warning function; and

- (b) the operations manual provided by the holder of the certificate authorising the operation of the aeroplane sets out the details of a course of training in awareness of controlled flight into terrain; and
  - (c) the pilot in command of the aeroplane, and (if applicable) any other pilot occupying a control seat in the aeroplane, have completed the course of training.
- 10.4 Paragraphs 10.2 and 10.3 cease to have effect at the end of 31 December 2000.
- 10.5 On and after 1 January 2001, an operator who holds a certificate authorising the operation of a turbine engine aeroplane that:
- (a) has a maximum take-off weight of more than 15 000 kg or is carrying 10 or more passengers; and
  - (b) is engaged in regular public transport, or charter, operations;
- must ensure that the aeroplane is not operated under the I.F.R. unless it is fitted with a GPWS being:
- (c) an approved GPWS that has a predictive terrain hazard warning function; or
  - (d) if paragraph 10.6 applies — a GPWS that meets the requirements of section 108.36 (a section 108.36 GPWS).
- 10.6 Up to the end of June 2005, an aeroplane may be fitted with a section 108.36 GPWS:
- (a) if, immediately before 1 January 2001, paragraph 10.2 applied to the aeroplane; or
  - (b) if the aeroplane first becomes a foreign registered aircraft on or after 1 January 2001 (unless it is an aircraft in respect of which an undertaking has been given under paragraph 9.1A of section 20.18, as in force immediately before 1 January 2001); or
  - (c) if:
    - (i) immediately before 1 January 2001, paragraph 10.2 did not apply to the aeroplane because of paragraph 10.3; and
    - (ii) the holder of the AOC authorising the operation of the aeroplane (the AOC holder) provides satisfactory evidence to CASA, in accordance with paragraph 10.7, that it is not possible to fit the aeroplane with an approved GPWS that has a predictive terrain hazard warning function.
- 10.7 For the purposes of sub-subparagraph 10.6 (c) (ii), evidence is taken to be satisfactory only if it is:
- (a) a statement in writing to the AOC holder from the manufacturer of an approved GPWS that has a predictive terrain hazard warning function; or
  - (b) a statutory declaration by the AOC holder;
- to the effect that the FAA's list of supplemental type certificates does not include any reference to a supplemental type certificate relating to the fitting of an approved GPWS that has that function.
- 10.8 The operator of a foreign registered aircraft must ensure that it complies with the requirements (**Directions**) in Appendices 4 and 4A. The definitions in Appendix 4 also apply for Appendices 4A and 5.
- 10.9 If the pilot in command of an aircraft operated under an AOC uses an EFB as a means of complying, or partially complying, with paragraph 233 (1) (h) of the *Civil Aviation Regulations 1988*, each certificate authorising operations under the AOC is subject to the condition that the AOC holder must comply with, and ensure flight crew compliance with, the applicable requirements in Appendix 9 of Civil Aviation Order 82.0 (**CAO 82.0**).

10.10 For paragraph 10.9, **EFB** has the meaning given to it in Appendix 9 of CAO 82.0.

## **11 Obligations in relation to AOC Holder's Safety Questionnaire**

11.1 CASA may in writing or by electronic means or by facsimile ask an AOC holder to complete an AOC Holder's Safety Questionnaire (**AHSQ**) by accurately answering all questions in the AHSQ.

11.2 Each AOC holder must:

- (a) comply with the request; and
- (b) ensure that the AHSQ is completed and submitted not later than 28 days after being asked by CASA.

11.3 An AOC holder may before the end of the 28 day period apply in writing to CASA for an extension.

11.4 CASA may grant the extension subject to conditions.

## **12 Obligation to preserve cockpit voice recorder and flight data recorder records**

12.1 This subsection applies if:

- (a) there is an immediately reportable matter for an aircraft; and
- (b) there is a cockpit voice recorder or flight data recorder record for the matter.

*Note 1* See section 18 of the *Transport Safety Investigation Act 2003* (the **TSI Act**) for the requirement to report an immediately reportable matter.

*Note 2* Under section 24 of the TSI Act, it is an offence to hinder an investigation under the Act.

*Note 3* Under subsection 43 (1) of the TSI Act, the Chief Commissioner of the Australian Transport Safety Bureau (**ATSB**) may direct that specified things, or things in a specified class, must not be removed or interfered with except with his or her permission. Under subsection 43 (3) of the Act, contravention of a direction is an offence.

12.2 Each AOC holder must preserve cockpit voice recorder and flight data recorder records (the **records**) in accordance with this subsection.

*Note* This paragraph does not affect the obligations that exist under the TSI Act to report immediately reportable matters to the responsible authority.

12.3 The AOC holder must ensure that the records are preserved as follows:

- (a) if the responsible authority notifies the holder that the records need not be preserved — until the date the notification is given to the holder; or
- (b) if the responsible authority notifies the holder that the records must be preserved until a date stated in the notice — until the stated date, or until a later stated date if a second or subsequent notification is given to the holder before the previous notification expires; or
- (c) if the responsible authority does not notify the holder as mentioned in subparagraph (a) or (b) within the 30 days after the matter occurred — until the end of the 30 days.

*Note 1* Notification may be in writing, or if oral, may be confirmed in writing. Use of electronically recorded communications on the official telephone line enables the responsible authority to communicate its decision immediately, if appropriate, while providing factual evidence that the decision was communicated.

*Note 2* ATSB has procedures to ensure that its communications on the official telephone line are acknowledged as understood.

12.4 The holder must ensure that, despite paragraph 12.2, a person on board the holder's aircraft must not disable or switch off the aircraft's cockpit voice recorder or flight data recorder during flight.

12.5 In this subsection:

***immediately reportable matter*** has the meaning given by subsection 3 (1) of the TSI Act.

***notifies*** means informs orally or in writing.

***official telephone line*** means the telephone line that is:

- (a) nominated by the responsible authority for the reporting of immediately reportable matters; and
- (b) published in an official aeronautical information publication.

*Note* For example, the nominated official telephone line for reporting immediately reportable matters to the ATSB is toll-free call 1800 011 034 as published in the AIP.

***responsible authority*** means the ATSB established by section 12 of the TSI Act.

## Appendix 1

Paragraph 2.3

### Facilities and documentation

#### 1 Facilities

- 1.1 Each operator must provide and maintain at least the following facilities:
- (a) an operating headquarters through which CASA may communicate with the person or persons responsible for any aspect of the operations conducted under the terms of the certificate;
  - (b) buildings at each place where operating crew are based of adequate size and suitable for the conduct of the operator's operations;
  - (c) facilities for operational planning and the storage and display of essential records, with office services to ensure that operational instructions and information of an essential nature are produced and circulated without delay;
  - (d) at each port serviced by the operator, a set of weighing scales suitable for determining passenger and cargo weight;
  - (e) training facilities and aids as required by Appendix 2.

#### 2 Documentation

- 2.1 Each operator must provide and maintain:
- (a) at each operating base where the operator maintains flight crew rostering staff — an operations library of maps, charts, flight guides and other documents required for carriage in flight or for reference or planning purposes;
  - (b) a reference library of operational documents which is readily available to all operating crew and staff and which includes:
    - (i) operations manuals; and
    - (ii) training and checking manuals; and
    - (iii) dangerous goods manuals; and
    - (iv) a Maintenance Manual; and
    - (v) a copy of the Act, the *Civil Aviation Regulations 1988*, the *Civil Aviation Regulations 1998* and those Parts of the Civil Aviation Orders that apply to operator's operations.
- 2.2 The documentation referred to in subclause 2.1 must be kept in an orderly fashion and must be regularly updated and the responsibility for its maintenance must be clearly defined.
- 2.3 Each operator must distribute updated operational material to flight crews and other operating staff as appropriate, and must maintain records of that distribution.
- 2.4 Each operator must maintain:
- (a) up-to-date records showing the recent experience status of each flight crew member and the currency of medical certificates, ratings and endorsements held by each such member; and
  - (b) up-to-date records showing the flight time and duty time achieved by each flight crew member for the periods set out in Part 48 of the Orders; and
  - (c) records showing each flight crew member's recent experience for the purposes of crew duty and route and aerodrome qualifications; and
  - (d) current flight crew rosters; and

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- (e) load sheets and passenger and cargo manifests as required by section 20.16.1; and
- (f) fuel records as required by regulation 220; and
- (g) training and checking records as required by Appendix 2.

## Appendix 2

Paragraph 3.2

### Training and checking organisation

#### 1 General

- 1.1 A training and checking organisation provided by an operator:
  - (a) must be wholly contained within the operator's organisational structure; and
  - (b) must be wholly responsible to the operator for the standard of flight operations.

#### 2 Management

- 2.1 Each operator must appoint a person to be the training and checking manager (however called) who has the overall responsibility for the effective management of the training and checking organisation. The appointment of the person is subject to the prior approval of CASA and the appointment is not to be varied without CASA's prior consent.
- 2.2 The person appointed under paragraph 2.1 must possess extensive experience as a check captain and is required to maintain, for the duration of his or her appointment:
  - (a) unless otherwise approved in writing by CASA — an air transport pilot (aeroplane) licence and a command endorsement for a major aeroplane type in current service with the operator; and
  - (b) a current command instrument rating; and
  - (c) a current check captain approval on a major aeroplane type in current service with the operator.
- 2.3 Each operator must provide sufficient additional persons having experience and qualifications acceptable to CASA to supervise the competence of operating crew members on each aeroplane type in current service with the operator and to ensure the maintenance of operational standards. The number of persons so provided is subject to the approval of CASA.
- 2.4 All persons appointed to a position with the training and checking organisation must be in the full-time employment of the operator.
- 2.5 Paragraph 2.4 will be satisfied in respect of a person provided under contract or lease from another organisation, if, for the duration of the contract or lease:
  - (a) the operator assigns the hours to be worked by that person; and
  - (b) the operator assigns the duties to be carried out by that person; and
  - (c) the person is responsible to the operator for the manner in which his or her assigned duties are carried out; and
  - (d) the contracting or leasing organisation does not require the person to carry out duties other than those assigned by the operator, except that the person may compile and complete such reports relating to the conduct of the contract or lease as the contracting or leasing organisation may reasonably require.

#### 3 Ground facilities, equipment and training aids

- 3.1 Each operator must provide adequate office accommodation for the training and checking manager and his or her staff and must supply such administrative services support as may be necessary.
- 3.2 Each operator must provide an enclosed room or rooms suitable for the conduct of such briefings, interviews or special instruction as may be associated with the conduct

of flight crew licence renewal tests or proficiency demonstrations. The room or rooms so provided must be furnished in such a manner as to facilitate their intended purpose.

- 3.3 Each operator must provide an area suitable for the periodic demonstrations of proficiency in emergency procedures required by section 20.11 and must make available such items of emergency equipment as may be necessary.
- 3.4 An operator proposing to conduct pilot engineering ground training must submit, for the approval of CASA, a detailed statement of the ground facilities proposed, including:
- (a) the number, size and location of classrooms; and
  - (b) the number of students to be accommodated by each classroom and the facilities provided for each student; and
  - (c) the number and types of training aids provided; and
  - (d) the provision for lighting and darkening the classrooms; and
  - (e) the provisions for heating and/or cooling the classrooms where climatic conditions require it; and
  - (f) the training notes or manuals to be issued to each student; and
  - (g) the examinations used to assess student performance; and
  - (h) the facilities for the production of such notes, manuals, charts, slides or other consumable aids as may be proposed.

### **3.5 Audio-visual briefing facilities**

- 3.5.1 Each operator proposing to conduct audio-visual briefing for the purposes of subsection 9 of this section must provide:
- (a) the facilities described in paragraph 3.5.2 that are approved by CASA; or
  - (b) such other facilities as CASA may accept as equivalent.
- 3.5.2 Each operator seeking credit for audio-visual briefing must provide the following facilities and equipment:
- (a) a still 35mm slide projector of a type capable of being viewed in daylight and with a screen area not less than 625cm<sup>2</sup>;
  - (b) a cassette tape recorder capable of being synchronised to the slide projector;
  - (c) a set of 35mm photographic colour slides complying with paragraph 3.6.1 in respect of each aerodrome for which entry credit is sought;
  - (d) a set of 35mm photographic colour slides complying with paragraph 3.7.1 in respect of each route for which route credit is sought;
  - (e) a pre-recorded cassette tape for each set of 35mm slides, complying with paragraph 3.6.3 or 3.7.1 as appropriate;
  - (f) written summaries of each cassette tape, to be available to flight crew members at the time of the audio-visual briefing;
  - (g) a room for the purpose of conducting audio-visual briefings, containing suitable seating, storage and cataloguing facilities.

### **3.6 Aerodrome entry**

- 3.6.1 For the purposes of 3.5.2 (c), the set of photographic slides must cover at least:
- (a) geographic location of the aerodrome; and
  - (b) general view of the aerodrome and the surrounding terrain; and
  - (c) diagram of the usual method of instrument or visual approach if there are abnormal features or irregularities in that approach; and



- (d) the approach to each runway used by the operator's aircraft; and
  - (e) tarmac or parking area; and
  - (f) such other views as may be necessary to adequately cover obstructions or peculiarities in the local area.
- 3.6.2 Where day services are scheduled, day scenes must be provided, and where night services are scheduled, night scenes must be provided. Artwork may be used to draw attention to specific areas or items.
- 3.6.3 For the purposes of 3.5.2 (e), the pre-recorded cassette commentary must be matched to the corresponding photographic slides and must cover at least:
- (a) geographic location; and
  - (b) location in the flight network, including diversion routes; and
  - (c) local terrain; and
  - (d) weather; and
  - (e) navigational aids; and
  - (f) communications and traffic; and
  - (g) aerodrome details; and
  - (h) description of the approach and other views as appropriate; and
  - (i) tarmac and ground facilities.
- 3.7 Briefing for route qualification**
- 3.7.1 For the purposes of 3.5.2 (c) and 3.5.2 (e), the briefing for route qualifications is to consist of a set of 35mm colour slides and a matched pre-recorded cassette tape covering as many of the following points as may be relevant to the route under discussion:
- (a) geographic location of the aerodromes comprising the route;
  - (b) administration:
    - (i) local time zones;
    - (ii) documentation to be carried;
    - (iii) prerequisite qualifications (e.g. physical entry or audio-visual briefing for any of the en-route aerodromes);
    - (iv) customs, health and immigration requirements for crew and/or passengers;
    - (v) fuel policy;
    - (vi) special equipment or extra personnel to be carried;
  - (c) navigation and flight-planning:
    - (i) planned route and alternates/emergency airfields;
    - (ii) special navigational techniques or limitations;
    - (iii) controlled airspace/restricted airspace;
    - (iv) maps and charts;
    - (v) flight planning;
    - (vi) weather;
  - (d) in-flight procedures:
    - (i) communications;
    - (ii) altimetry and Air Traffic Control procedures;
    - (iii) reporting points;

- (e) other relevant information.

#### **4 Training and checking manual**

- 4.1 Each operator must provide a training and checking manual for the use and guidance of persons appointed within the training and checking organisation and must furnish copies of the manual to:
  - (a) CASA; and
  - (b) all operating crew members assigned to checking and/or training duties.
- 4.2 The training and checking manual must include the following material:
  - (a) the structure of the training and checking organisation and the assignment of duties and responsibilities to the appointments within the organisation;
  - (b) course outline, detailed syllabus, completion standards and specimen record forms for each flight or simulator training program currently in use;
  - (c) minimum qualifications and experience for check captains;
  - (d) flight time limitations and recent experience for pilots engaged in flight checking or training duties;
  - (e) training checklists (if applicable) and the occasions on which their use is authorised;
  - (f) command responsibility during training and checking flights, including licence renewal proficiency checks;
  - (g) minimum numbers of crew and minimum crew qualifications for specified types of training;
  - (h) general restrictions, specifications or safety precautions for flight training (e.g. fuel load, ballast, minimum weather conditions);
  - (i) prescribed methods of conducting various training sequences including:
    - (i) technique and standard to be achieved; and
    - (ii) common faults; and
    - (iii) method of simulating emergencies and/or malfunctions;
  - (j) procedure to be followed when a satisfactory standard is not achieved.
- 4.3 The material referred to in paragraph 4.2 is subject to the approval of CASA and is not to be varied without CASA's prior approval, although the operator may include additional material for information and guidance without CASA's approval.

#### **5 Training methods**

- 5.1 Each operator must maintain a training file in respect of each flight crew member, recording at least:
  - (a) each ground training course completed or attempted, including the results for each phase or subject and the final assessment of the standard achieved; and
  - (b) each endorsement training course completed or attempted, including the results of each phase of training, the number of times each exercise was undertaken and the results of tests or checks; and
  - (c) each flight or simulator proficiency check completed or attempted, including the number of times each exercise was undertaken and the results of the checks; and
  - (d) each period of training, other than training referred to in paragraph (a), (b) or (c), undertaken in an aircraft or simulator, including the exercises completed or attempted, and an assessment of the standard achieved.

## Appendix 3

Paragraph 3.4

### 1 Operations manual

- 1.1 Each operator must include the following information in the operator's operations manual:
- (a) aircraft operating limitations;
  - (b) all normal, abnormal and emergency operating procedures for those aircraft;
  - (c) all aircraft operating check lists, amplified where necessary;
  - (d) aircraft performance and flight planning data including specific instructions for the computation of fuel and oil to be carried, having regard to all the circumstances of operation including the possibility of failure of 1 or more power plants or pressurisation failure;
  - (e) procedures for navigation by means of the navigation equipment provided;
  - (f) procedures for maintaining radio communication and conformity with air traffic control;
  - (g) the operating crew complement for all operations including the designation of the succession of command;
  - (h) instructions outlining the responsibilities of all crew members pertaining to the conduct of operations including in-flight emergency duties assigned to each crew member;
  - (i) instructions which will ensure that the pilot in command will have, for each flight, detailed information with respect to communications, navigation aids, instrument approach procedures, and other such information as the operator considers to be necessary for the routes to be operated;
  - (j) instructions for determining that the aircraft weight and distribution of load are within the approved limits;
  - (k) instructions for determining that the aircraft performance is adequate under the prevailing conditions in respect of the runway to be used and that the aircraft will meet all the obstacle clearance and climb gradient requirements;
  - (l) information as to the conditions under which oxygen must be used;
  - (m) the permissible unserviceability schedule;
  - (n) procedures for the use of emergency equipment and passenger handling in an emergency;
  - (o) procedures for operating in severe weather conditions involving ice, hail, thunderstorms, turbulence or potentially hazardous meteorological conditions;
  - (p) procedures and instructions relating to the handling and carriage of dangerous goods;
  - (q) such operational specifications as may be prescribed by CASA from time to time.
- 1.2 Each operator must include separate specific sections in the operations manual devoted to:
- (a) operational specifications; and
  - (b) permissible unserviceabilities.
- 1.3 Each operator must ensure that the presentation and form of the operations manual is such that it:
- (a) can be conveniently carried; and

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- (b) permits quick, clear and accurate reference; and
- (c) has amendment procedures designed to avoid error; and
- (d) is durable.

## Appendix 4

Paragraph 10.8

### Directions relating to carriage and use of automatic dependent surveillance – broadcast equipment

1 In this Appendix:

**ADS-B** means automatic dependent surveillance – broadcast.

**ADS-B test flight** means a flight to prove ADS-B transmitting equipment that is newly installed on the aircraft undertaking the flight.

**aircraft** means a foreign aircraft.

**aircraft address** means a unique code of 24 binary bits assigned to an aircraft by or under the authority of an NAA for the purpose of air to ground communication, navigation and surveillance.

**approved equipment configuration** means an equipment configuration that:

- (a) meets the conditions for approval set out in Appendix 5; or
- (b) is approved in writing by CASA.

*Note* Equipment configurations approved by CASA are published in Appendix D of Advisory Circular 21-45.

**ATC** means air traffic control.

**ATSO** means Australian Technical Standard Order of CASA.

**EASA** means the European Aviation Safety Agency.

**EASA AMC 20-24** means EASA document AMC 20-24 titled *Certification Considerations for Enhanced ATS in Non-Radar Areas using ADS-B Surveillance (ADS-B-NRA) via 1090 MHz Extended Squitter*, dated 2 May 2008.

**EHS DAPs** means enhanced surveillance downlink of aircraft parameters.

**ETSO** means European Technical Standard Order of the EASA.

**FAA** means the Federal Aviation Administration of the United States.

**FDE** means Fault Detection and Exclusion, a feature of a GNSS receiver that excludes faulty satellites from position computation.

**FL 290** means flight level 290.

*Note* Flight level 290 is defined in subregulation 2 (1) of CAR 1988.

**GNSS** means the Global Navigation Satellite System installed in an aircraft to continually compute the position of the aircraft by use of the GPS.

**GPS** means the Global Positioning System.

**HPL** means the Horizontal Protection Level of the GNSS position of an aircraft as an output of the GNSS receiver or system.

**Mode A** is a transponder function that transmits a 4-digit octal identification code for an aircraft when interrogated by an SSR, the code having been assigned to the aircraft by ATC for the relevant flight sector.

**Mode A code** is the 4-digit octal identification code transmitted by a Mode A transponder function.

**Mode C** is a transponder function that transmits a 4-digit octal code for an aircraft's pressure altitude when interrogated by an SSR.

**Mode C code** is the 4-digit octal identification code transmitted by a Mode C transponder function.

**Mode S** is a monopulse radar interrogation technique that improves the accuracy of the azimuth and range information of an aircraft, and uses a unique aircraft address to selectively call individual aircraft.

**NAA** has the same meaning as in regulation 1.4 of the *Civil Aviation Safety Regulations 1998*.

*Note* “NAA, for a country other than Australia, means:

- (a) the national airworthiness authority of the country; or
- (b) EASA, in relation to any function or task that EASA carries out on behalf of the country.”

**NIC** means Navigation Integrity Category as specified in paragraph 2.2.3.2.7.2.6 of RTCA/DO-260A.

**NUCp** means Navigation Uncertainty Category — Position as specified in paragraph 2.2.8.1.5 of RTCA/DO-260.

**RTCA/DO-229D** means document RTCA/DO-229D titled *Minimum Operational Performance Standards for Global Positioning System/Wide Area Augmentation System Airborne Equipment*, dated 13 December 2006, of the RTCA Inc. of Washington D.C. USA (**RTCA Inc.**).

**RTCA/DO-260** means RTCA Inc. document RTCA/DO-260 titled *Minimum Operational Performance Standards for 1090 MHz Automatic Dependent Surveillance – Broadcast*, dated 13 September 2000.

**RTCA/DO-260A** means RTCA Inc. document RTCA/DO-260A titled *Minimum Operational Performance Standards for 1090 MHz Automatic Dependent Surveillance – Broadcast (ADS-B) and Traffic Information Services – Broadcast (TIS-B)*, dated 10 April 2003.

**SA** means Selective Availability, and is a function of the GPS that has the effect of degrading the accuracy of the computed GPS position of a GNSS-equipped aircraft.

**SSR** means a secondary surveillance radar system that is used by ATC to detect an aircraft equipped with a radar transponder.

**TSO** means Technical Standard Order of the FAA.

*Note* NAA is defined in regulation 1.4 of the *Civil Aviation Safety Regulations 1998*.

- 2 If an aircraft carries ADS-B transmitting equipment for operational use in Australian territory, the equipment must comply with an approved equipment configuration.
- 3 If an aircraft carries serviceable ADS-B transmitting equipment for operational use in Australian territory, the equipment must transmit:
  - (a) a flight identification that corresponds exactly to the aircraft identification mentioned on the flight notification filed with, or relayed to air traffic control (**ATC**) for the flight; or
  - (b) another flight identification directed or approved by ATC.
- 4 If an aircraft carries serviceable ADS-B transmitting equipment that complies with an approved equipment configuration, the equipment must be operated continuously during the flight in all airspace at all altitudes unless the pilot is directed or approved otherwise by ATC.
- 5 If an aircraft carries ADS-B transmitting equipment which does not comply with an approved equipment configuration, the aircraft must not fly in Australian territory unless the equipment is:
  - (a) deactivated; or
  - (b) set to transmit only a value of zero for the NUCp or NIC.

*Note* It is considered equivalent to deactivation if NUCp or NIC is set to continually transmit only a value of zero.

- 6 However, the equipment need not be deactivated as mentioned in clause 5 if the aircraft is undertaking an ADS-B test flight in VMC in airspace below FL 290.
- 7 Subject to clause 8, on and after 12 December 2013, if an aircraft operates at or above FL 290, it must carry serviceable ADS-B transmitting equipment that complies with an approved equipment configuration.
- 7A Subject to clause 8, on and after 2 February 2017, an aircraft that is operated under the I.F.R. must carry serviceable ADS-B equipment that complies with an approved equipment configuration.
- 8 Clauses 7 and 7A do not apply to an aircraft if:
  - (a) the aircraft owner, operator or pilot has written authorisation from CASA for the operation of the aircraft without the ADS-B transmitting equipment; or
  - (b) the equipment is unserviceable for a flight, and each of the following applies:
    - (i) the flight takes place within 3 days of the discovery of the unserviceability; and
    - (ii) at least 1 of the following applies for the flight:
      - (A) flight with unserviceable instruments or equipment has been approved by CASA, subject to such conditions as CASA specifies;
      - (B) the unserviceability is a permissible unserviceability set out in the minimum equipment list as approved by the NAA of the State of registration of the aircraft;
      - (C) CASA has approved the flight with the unserviceable equipment and any applicable conditions that CASA has specified in writing have been complied with; and
    - (iii) ATC clears the flight before it commences despite the unserviceability.

## Appendix 4A

Paragraph 10.8

### Standards for Mode S transponder equipment

- 1 If the aircraft carries Mode S transponder equipment (the *equipment*), the equipment must meet the standards set out in this Appendix.
- 2 The equipment must be of a type that is authorised by:
  - (a) the FAA, in accordance with TSO-C112 as in force on 5 February 1986, or a later version as in force from time to time; or
  - (b) EASA, in accordance with ETSO-C112a as in force on 24 October 2003, or a later version as in force from time to time; or
  - (c) CASA, in accordance with an instrument of approval of the type.

*Note 1* CASA Advisory Circular 21-46 provides guidelines on Mode S transponder equipment.

*Note 2* If Mode S transponder equipment incorporates ADS-B functionality, the standards set out in Appendix 4 for ADS-B transmitting equipment will also apply to the Mode S transponder equipment.

- 3 The aircraft address entered into the equipment must exactly correspond to the aircraft address assigned to the aircraft by the NAA of the State of registration of the aircraft.
- 4 The equipment must transmit each of the following when interrogated on the manoeuvring area of an aerodrome or in flight:
  - (a) the aircraft address;
  - (b) the Mode A code;
  - (c) the Mode C code;
  - (d) subject to clause 6, the aircraft flight identification in accordance with clause 5.
- 5 The aircraft flight identification must:
  - (a) if a flight notification is filed with ATC for the flight — correspond exactly with the aircraft identification mentioned on the flight notification; or
  - (b) if no flight notification is filed with ATC for the flight — be the aircraft's nationality and registration mark; or
  - (c) be another flight identification directed or approved for use by ATC.
- 6 Mode S transponder transmission of the aircraft flight identification is optional for any aircraft that was first registered in its State of registration before 9 February 2012 (an *older aircraft*). However, if an older aircraft is equipped to transmit, and transmits, an aircraft flight identification then that aircraft flight identification must be in accordance with clause 5.
- 7 If the equipment transmits any Mode S EHS DAPs, the transmitted DAPs must comply with the standards set out in paragraph 3.1.2.10.5.2.3 and Table 3-10 of Volume IV, Surveillance and Collision Avoidance Systems, of Annex 10 of the Chicago Convention.

*Note 1* Paragraph 3.1.2.10.5.2.3 includes 3.1.2.10.5.2.3.1, 3.1.2.10.5.2.3.2 and 3.1.2.10.5.2.3.3.

*Note 2* Australian Mode S SSR are EHS DAPs-capable, and operational use of EHS DAPS is to be introduced in Australia. Implementation of Mode S EHS DAPs transmissions that are not in accordance with the ICAO standards may be misleading to ATC. Operators need to ensure that correct parameters are being transmitted.
- 8 If the equipment is carried in an aircraft first registered in its State of registration on or after 9 February 2012:
  - (a) having a certificated maximum take-off weight above 5 700 kg; or



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(b) that is capable of normal operation at a maximum cruising true air speed above 250 knots;

the equipment's receiving and transmitting antennae must:

(c) be located in the upper and lower fuselage; and

(d) operate in diversity, as specified in paragraphs 3.1.2.10.4 to 3.1.2.10.4.5 (inclusive) of Volume IV, Surveillance and Collision Avoidance Systems, of Annex 10 of the Chicago Convention.

*Note* Paragraph 3.1.2.10.4.2.1 is recommendatory only.

## Appendix 5

Paragraph 10.8 and definition of *approved equipment configuration*  
in clause 1 of Appendix 4

### Part A

Approved equipment configuration

- 1 An equipment configuration is approved if it complies with the standards specified in Part B or Part C of this Appendix.

### Part B

ADS-B transmitting equipment — standard for approval

- 2 ADS-B transmitting equipment must be of a type that:
  - (a) is authorised by:
    - (i) the FAA in accordance with TSO-C166 as in force on 20 September 2004, or a later version as in force from time to time; or
    - (ii) CASA, in writing, in accordance with:
      - (A) ATSO-C1004a as in force on 16 December 2009, or a later version as in force from time to time; or
      - (B) ATSO-C1005a as in force on 16 December 2009, or a later version as in force from time to time; or
  - (b) meets the following requirements:
    - (i) the type must be accepted by CASA as meeting the specifications in RTCA/DO-260 dated 13 September 2000, or a later version as in force from time to time;
    - (ii) the type must utilise HPL at all times HPL is available; or
  - (c) is otherwise authorised, in writing, by CASA for the purposes of subsection 9B of Civil Aviation Order 20.18 as being equivalent to one of the foregoing types.

GNSS position source equipment — standard for aircraft manufactured on or after 8 December 2016

- 3 For an aircraft manufactured on or after 8 December 2016, the geographical position transmitted by the ADS-B transmitting equipment must be determined by:
  - (a) a GNSS receiver of a type that is authorised by the FAA in accordance with TSO-C145a or TSO-C146a as in force on 19 September 2002, or a later version as in force from time to time; or
  - (b) a GNSS receiver of a type that is authorised by the FAA in accordance with TSO-C196 as in force on 9 September 2009, or a later version as in force from time to time; or
  - (c) a GNSS receiver or system which meets the following requirements:
    - (i) is certified by an NAA for use in flight under the I.F.R.;
    - (ii) has included in its specification and operation the following:
      - (A) FDE, computed in accordance with the definition at paragraph 1.7.3 of RTCA/DO-229D;
      - (B) the output function HPL, computed in accordance with the definition at paragraph 1.7.2 of RTCA/DO-229D;
      - (C) functionality that, for the purpose of HPL computation, accounts for the absence of the SA of the GPS in accordance with paragraph 1.8.1.1 of RTCA/DO-229D; or

(d) another equivalent system authorised in writing by CASA.

*Note* The following GNSS receivers meet the requirements of clause 3, namely, those certified to TSO-C145a or TSO-C146a, or later versions, or those manufactured to comply with TSO-C196.

**GNSS position source equipment — standard for aircraft manufactured before 8 December 2016**

- 4 For an aircraft manufactured before 8 December 2016, the geographical position transmitted by the ADS-B transmitting equipment must be determined by:
- (a) a GNSS receiver or system that complies with the requirements of clause 3, other than sub-subparagraph 3 (c) (ii) (C) which is optional; or
  - (b) an equivalent GNSS receiver or system that has been approved in writing by CASA.

*Note* The following GNSS receivers meet the requirements of clause 4, namely, those certified to TSO-C145a or TSO-C146a, or later versions, or those manufactured to comply with TSO-C196. Some later versions of GNSS receivers certified to TSO-C129 may also meet the requirements, i.e. those having FDE and HPL features incorporated.

**Altitude source equipment — standard**

- 5 The pressure altitude transmitted by the ADS-B transmitting equipment must be determined by:
- (a) a barometric encoder of a type that is authorised by:
    - (i) the FAA in accordance with TSO-C88a as in force on 18 August 1983, or a later version as in force from time to time; or
    - (ii) EASA in accordance with ETSO-C88a as in force on 24 October 2003, or a later version as in force from time to time; or
  - (b) another equivalent system authorised in writing by CASA.

**Aircraft address — standard**

- 6 Unless otherwise approved in writing by CASA, the ADS-B transmitting equipment must:
- (a) transmit the current aircraft address; and
  - (b) allow the pilot to activate and deactivate transmission during flight.

*Note* The requirement in paragraph 6 (b) is met if the ADS-B transmitting equipment has a cockpit control that enables the pilot to turn the ADS-B transmissions on and off.

**Part C**

**Alternative approved equipment configuration — standard for aircraft manufactured on or after 8 December 2016**

- 7 For an aircraft manufactured on or after 8 December 2016, an equipment configuration is approved if:
- (a) it has been certified by EASA as meeting the standards of EASA AMC 20-24; and
  - (b) the aircraft flight manual attests to the certification; and
  - (c) the GNSS receiver or system complies with the requirements of clause 3 in Part B.

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Alternative approved equipment configuration — standard for aircraft manufactured before 8 December 2016

- 8 For an aircraft manufactured before 8 December 2016, an equipment configuration is approved if:
  - (a) it has been certified by EASA as meeting the standards of EASA AMC 20-24; and
  - (b) the aircraft flight manual attests to the certification; and
  - (c) the GNSS receiver or system complies with the requirements of clause 4 in Part B.

## Notes to Civil Aviation Order 82.5

### Note 1

The Civil Aviation Order (in force under the *Civil Aviation Act 1988*) as shown in this compilation comprises Civil Aviation Order 82.5 amended as indicated in the Tables below.

#### Table of Orders

<b>Year and number</b>	<b>Date of notification in Gazette/ registration on FRLI</b>	<b>Date of commencement</b>	<b>Application, saving or transitional provisions</b>
CAO 2004 No. R55	23 December 2004 (F2005B00883)	23 December 2004 (s. 2)	
CAO 82.5 2005 No. 1	FRLI 2 November 2005 (F2005L03362)	3 November 2005 (s. 2)	
CAO 82.5 2007 No. 1	FRLI 18 June 2007 (F2007L01691)	19 June 2007 (s. 2)	
CAO 82.5 2007 No. 2	FRLI 30 October 2007 (F2007L04072)	31 October 2007 (s. 2)	
CAO 82.5 2008 No. 1	FRLI 22 December 2008 (F2008L04374)	23 December 2008 (s. 2)	
CAO 82.5 2009 No. 1	FRLI 30 January 2009 (F2009L00233)	31 January 2009 (s. 2)	s. 3 (Table A)
CAO 82.5 2009 No. 2	FRLI 5 March 2009 (F2009L00211)	6 March 2009 (see s. 2)	
CAO 82.5 2009 No. 3	FRLI 21 December 2009 (F2009L04207)	22 December 2009 (s. 2)	
CAO 82.5 2010 No. 1	FRLI 12 April 2010 (F2010L00701)	13 April 2010 (s. 2)	
CAO 82.5 2010 No. 2	FRLI 28 May 2010 (F2010L01261)	3 June 2010 (s. 2)	
CAO 82.5 2010 No. 3	FRLI 21 December 2010 (F2010L03328)	22 December 2010 (s. 2)	
CAO 82.5 2011 No. 1	FRLI 25 March 2011 (F2011L00497)	26 March 2011 (s. 2)	
CAO 82.5 2011 No. 2	FRLI 22 June 2011 (F2011L01195)	27 June 2011 (s. 2)	
CAO 82.5 2011 No. 3	FRLI 13 January 2012 (F2012L00037)	14 January 2012 (s. 2)	
CAO 82.5 2012 No. 1	FRLI 22 March 2012 (F2012L00660)	23 March 2012 (s. 2)	
CAO 82.5 2012 No. 2	FRLI 21 November 2012 (F2012L02210)	22 November 2012 (s. 2)	
CAO 82.5 2014 No. 1	FRLI 21 May 2014 (F2014L00585)	22 May 2014 (s. 2)	
CAO 82.5 2014 No. 2	FRLI 22 August 2014 (F2014L01114)	23 August 2014 (s. 2)	

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### Table of Amendments

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

Provision affected	How affected
s. 82.5	rs. 2004 No. R55
subs. 2	am. CAO 82.5 2009 No. 1; CAO 82.5 2014 No. 2
subs. 2A	ad. CAO 82.5 2009 No. 1 am. CAO 82.5 2014 No. 2
subs. 2B	ad. CAO 82.5 2014 No. 2
subs. 2C	ad. CAO 82.5 2014 No. 2
subs. 2D	ad. CAO 82.5 2014 No. 2
subs. 2E	ad. CAO 82.5 2014 No. 2
subs. 2F	ad. CAO 82.5 2014 No. 2
subs.4	am. CAO 82.5 2011 No. 2
subs. 4A	ad. CAO 82.5 2011 No. 2
subs. 5	am. CAO 82.5 2005 No. 1
subs. 8	am. CAO 82.5 2008 No. 1
subs. 5B	rep. CAO 82.5 2010 No. 2
subs. 9A	ad. CAO 82.5 2009 No. 1
subs. 10	am. CAO 82.5 2007 No. 1; CAO 82.5 2009 No. 2; CAO 82.5 2011 No. 3; CAO 82.5 2012 No. 2
subs. 11	ad. CAO 82.5 2007 No. 2
subs. 12	ad. CAO 82.5 2010 No. 3 am. CAO 82.5 2011 No. 1
Appendix 1	am. CAO 82.5 2010 No. 1
Appendix 4	ad. CAO 82.5 2009 No. 2 am. CAO 82.5 2009 No. 3; CAO 82.5 2011 No. 3; CAO 82.5 2014 No.1
Appendix 4A	ad. CAO 82.5 2011 No. 3
Appendix 5	ad. CAO 82.5 2009 No. 2 rs. CAO 82.5 2009 No. 3 am. CAO 82.5 2011 No. 3; CAO 82.5 2012 No. 1

**Table A Application, saving or transitional provisions**

*Civil Aviation Order 82.5 Amendment Order (No. 1) 2009 (F2009L00233)*

**3 Application**

- (1) Unless CASA approves otherwise in writing for an operator, amendment 1 in Schedule 1 applies to each operator on and from:
  - (a) 1 July 2009; or
  - (b) if the operator notifies an earlier date in writing to CASA — that date.
- (2) Unless CASA approves otherwise in writing for an operator, amendment 2 in Schedule 1 applies to each operator on and from:
  - (a) 1 February 2010; or
  - (b) if the operator notifies an earlier date in writing to CASA — that date.

*Note* AOC holders may chose to have their operations governed by the new arrangements from a date before 1 July 2009 (for SMS), or before 1 February 2010 (for human factors and non-technical skills training).

- (3) Amendment 5 in Schedule 1 applies to each operator on and from 1 December 2009.

The amendments referred to in the application provision are set out below:

**Amendments**

**[1] Subparagraph 2.1 (a)**

*substitute*

- (a) establish and maintain an appropriate organisation, with a sound and effective management structure that uses a safety management system approved by CASA; and

*Note* Guidance on what CASA will consider in deciding whether to approve an SMS is contained in the following (the *CAAP SMS package*):

- (a) CAAP SMS-1(0) — Safety Management Systems for Regular Public Transport Operations;
- (b) CAAP SMS-2(0) — Integration of Human Factors (HF) into Safety Management Systems (SMS);
- (c) CAAP SMS-3(0) — Human Factors and Non-Technical Skills Training for Regular Public Transport Operations.

**[2] After subparagraph 2.1 (b)**

*insert*

- ; and (c) have a program, approved by CASA, to train and assess personnel in human factors and non-technical skills with the aim of minimising human error.

*Note* The CAAP SMS package contains guidance on what CASA will consider in deciding whether to approve a program for human factors and non-technical skills training.

**[5] After subsection 9**

*insert*

**9A Obligations in relation to international carriage of a copy of the AOC**

Each operator of an aircraft engaged in an international flight must ensure that the pilot in command can present a true and complete hard copy of the

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following documents to any person who has a lawful right to inspect them before, during or at the end of the flight:

- (a) the operator's current AOC; and
- (b) each operational specification (if any) issued in conjunction with the AOC that is relevant to the aircraft.