RPL Exam Legislation Extract

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(4) For regulations 61.405 to 61.415 (which are about medical requirements), piloting an aircraft in accordance with subregulation (3) does not constitute the exercise of the privileges of a pilot licence.

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

61.113 General requirements for student pilots

(1) A student pilot is authorised to conduct a solo flight in an aircraft only if the student pilot:
(a) has an ARN; and
(b) is at least 15.

(2) A student pilot is not authorised to pilot an aircraft carrying passengers.

(3) A student pilot is authorised to pilot an aircraft on a solo flight in another Contracting State's airspace only if the student pilot has the permission (however described) of the Contracting State.

(4) A student pilot is not authorised to pilot an aircraft other than a registered aircraft.

61.114 Solo flights—medical requirements for student pilots

(1) Subregulation (2) applies to:
(a) the conduct of a solo flight in an aircraft other than a recreational aircraft; or
(b) the conduct of a solo flight in a recreational aircraft under the VFR at night.

(2) A student pilot is authorised to conduct the flight only if:
(a) the student pilot:
(i) holds a class 1 or 2 medical certificate; and
(ii) carries the medical certificate on the flight; or
(b) the student pilot:
(i) holds a medical exemption for the flight; and
(ii) carries a copy of the exemption on the flight.

(3) Subregulation (4) applies to the conduct of a solo flight in a recreational aircraft by day, other than by the holder of a recreational pilot licence.

(4) A student pilot is authorised to conduct the flight only if:
(a) the student pilot:
(i) holds a class 1 or 2 medical certificate; and
(ii) carries the medical certificate on the flight; or
(b) the student pilot:
(i) holds a current recreational aviation medical practitioner's certificate; and
(ii) meets the requirements mentioned in subregulation (5); or

(c) the student pilot:
(i) holds a medical exemption for the flight; and
(ii) carries a copy of the exemption on the flight.

(5) For subparagraph (4)(b)(ii), the requirements are as follows:
(a) the student pilot must have:
(i) given CASA a copy of his or her recreational aviation medical practitioner's certificate; and
(ii) received from CASA a written acknowledgement of the receipt of the copy;
(b) the student pilot must carry both of the following on the flight:
(i) a copy of the certificate;
(ii) a copy of the acknowledgement mentioned in subparagraph (a)(ii);
(c) the student pilot must comply with any limitations or conditions stated on the certificate;
(d) the student pilot must meet the modified Austroads medical standards.

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

(6) In this regulation:

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

61.115 Solo flights—recent experience requirements for student pilots

(1) A student pilot is authorised to conduct a solo flight in an aircraft only if:
(a) the student pilot has, within the previous 30 days and in the same type of aircraft, successfully completed a dual flight check; and
(b) as a result of the flight, his or her solo flight time since he or she last successfully completed a dual flight check would not exceed 3 hours.

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

(3) In addition, paragraph (1)(b) does not apply to a student pilot in relation to the conduct of a solo flight in an aircraft if the pilot is undergoing training, conducted by a Part 141 operator, for the grant under Part 61 of a private pilot licence, or commercial pilot licence, with a rating for that category of aircraft, and:

(a) the pilot holds a recreational pilot licence with such a rating; or
(b) the Part 141 operator certifies, in writing, that the operator is satisfied that:
(i) the student pilot is competent to safely conduct a solo flight in an aircraft of the same category; and
(ii) the student pilot has met the competency standards for the grant, under Part 61, of a recreational pilot licence with a rating for that category of aircraft.

61.116 Student pilots authorised to taxi aircraft

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

Note: See regulation 91.415 for an offence relating to taxiing aircraft without being authorised to do so.

61.117 Identity checks—student pilots

(1) CASA may, by written notice given to a student pilot, require the student pilot to provide evidence of his or her identity in accordance with paragraph 6.57(1)(a) of the *Aviation Transport Security Regulations 2005*.

(2) The student pilot commits an offence if:
(a) CASA has not told the student pilot, in writing, that he or she has complied with the requirement; and
(b) the student pilots an aircraft.

Penalty: 50 penalty units.

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

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

(1) CASA may direct a student pilot to produce any or all of the following documents for inspection by CASA:
(a) unless the student pilot holds a medical exemption to conduct a solo flight—the student pilot's medical certificate or recreational aviation medical practitioner's certificate;
(b) a document that includes a photograph of the student pilot showing the student's full face and his or her head and shoulders:
(i) that was issued within the previous 10 years by the government, or a government authority, of:
(A) the Commonwealth or a State or Territory; or
(B) a foreign country, or a state or province (however described) of a foreign country; and
(ii) that has not expired or been cancelled.

(2) The student pilot commits an offence if:

(a) CASA directs the student pilot to produce a document under subregulation (1); and
(b) the student pilot does not produce the document before the earlier of the following:
(i) when the student pilot next conducts a solo flight;
(ii) within 7 days after the direction is given.

Penalty: 50 penalty units.

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

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

61.119 Flying without licence—flight engineer duties

A person who does not hold a flight engineer licence is authorised to perform the duties of a flight engineer in a registered aircraft while:
(a) receiving flight training from a flight engineer instructor; or
(b) taking a flight test for a flight engineer licence or a flight crew rating or endorsement on a flight engineer licence.

61.120 Operation of aircraft radio without licence

A person who does not hold a flight crew licence, or who holds a recreational pilot licence but does not hold a flight radio endorsement, is authorised to transmit on an aviation safety radio frequency if:
(a) the transmission is made while receiving training for a flight crew licence or flight radio endorsement; and
(b) the transmission is approved by an instructor; and
(c) the transmission is for the purpose of:
(i) safely conducting a flight that is approved by a flight instructor; or
(ii) receiving training in the use of an aircraft radio.

Note 1: A person is prohibited from transmitting on an aviation safety radio frequency unless the person is authorised or qualified to do so: see regulation 91.625.

Note 2: For the definition of ***aviation safety radio frequency***, see the Dictionary.

61.125 Conducting flight activities without rating or endorsement

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

(b) the activity is approved by, and conducted under the supervision of, a flight instructor.

(2) A person who holds a flight engineer licence, but does not hold a rating or endorsement for the conduct of an activity for which a rating or endorsement is required under this Part, is authorised to conduct the activity if:

(a) the activity is conducted while:

(i) receiving flight training for the rating or endorsement; or

(ii) taking a flight test for the rating or endorsement; or

(iii) meeting the aeronautical experience requirements for the rating or endorsement; and

(b) the activity is approved by, and conducted under the supervision of, a flight engineer instructor.

61.126 Conducting flight activities without having met proficiency check or flight review

(1) A person who holds a flight crew licence, but has not met the proficiency check requirements for the conduct of an activity for which a proficiency check is required under this Part, is authorised to conduct the activity while the person undertakes the proficiency check.

(2) A person who holds a flight crew licence, but has not met the flight review requirements for the conduct of an activity for which a flight review is required under this Part, is authorised to conduct the activity while the person undertakes the flight review.

61.130 Operation of helicopter using auto flight control system without licence or rating

(1) This regulation applies to a person who, apart from this regulation, would not be authorised under this Part to pilot a helicopter.

(2) The person is authorised to pilot the helicopter using the helicopter's auto flight control system if:

(a) the person is approved to do so by the helicopter's:

(i) operator; and

(ii) pilot in command; and

(b) the person does so under the supervision of the pilot in command.

61.135 Authorisation to conduct flight training or flight test without holding type rating

(1) An instructor may apply to CASA, in writing, for authorisation to conduct training for the grant of a pilot type rating or flight engineer type rating in an aircraft for which the instructor does not hold the rating.

(ii) for a flight crew licence other than a recreational pilot licence—has a current aviation English language proficiency assessment; and

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

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

61.165 Grant of flight crew ratings

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

(a) the application complies with regulation 61.155; and

(b) for an application to an examiner or approval holder—the examiner or approval holder may, under regulation 61.150, grant the rating; and

(c) the applicant meets the requirements mentioned in this Part for the grant of the rating.

61.170 Grant of flight crew endorsements

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

(a) the application complies with regulation 61.155; and

(b) for an application to an examiner, instructor or approval holder—the examiner, instructor or approval holder may, under regulation 61.150, grant the endorsement; and

(c) the applicant meets the requirements mentioned in this Part for the grant of the endorsement.

61.175 How CASA issues flight crew licences, ratings and endorsements

(1) Subregulation (2) applies if:

(a) CASA grants a flight crew licence to a person under regulation 61.160; and

(b) the person does not already hold a flight crew licence.

(2) For subregulation (1), CASA must issue to the person a document (the ***licence document***) indicating that the person is authorised to exercise the privileges of:

(a) the flight crew licence; and

(b) if, at the same time, CASA also grants a flight crew rating or endorsement to the person under regulation 61.165 or 61.170—the rating or endorsement.

(3) Subregulation (4) applies if:

(a) CASA grants a flight crew licence (the ***new licence***) to a person under regulation 61.160; and

(b) the person already holds a flight crew licence (the ***existing licence***).

(4) For subregulation (3), CASA must issue to the person a new licence document indicating that the person is authorised to exercise the privileges of:
  (a) the new licence; and
  (b) the existing licence; and
  (c) any flight crew ratings and endorsements that the person already holds or that CASA grants at the same time as the new licence.

(5) Subregulation (6) applies if:
  (a) CASA grants a flight crew rating or endorsement to a person under regulation 61.165 or 61.170, other than a rating or endorsement granted at the same time as a flight crew licence; and
  (b) the person already holds a flight crew licence.

(6) For subregulation (5), CASA must endorse the person's licence document to the effect that the person is authorised to exercise the privileges of the rating or endorsement.

61.180 How examiner, instructor or approval holder issues rating or endorsement

(1) If an examiner or approval holder grants a flight crew rating to a person under regulation 61.165, the examiner or approval holder must:
  (a) endorse the person's licence document to the effect that the person is authorised to exercise the privileges of the rating; and
  (b) give CASA a written notice that the person has met the requirements mentioned in this Part for the grant of the rating.

(2) If an examiner, instructor or approval holder grants a flight crew endorsement to a person under regulation 61.170, the examiner, instructor or approval holder must:
  (a) endorse the person's licence document to the effect that the person is authorised to exercise the privileges of the endorsement; and
  (b) give CASA a written notice that the person has met the requirements mentioned in this Part for the grant of the endorsement.

(3) An examiner, instructor or approval holder commits an offence if he or she contravenes subregulation (1) or (2).

  Penalty: 50 penalty units.

(4) If CASA is satisfied that the rating or endorsement was issued in error, CASA must cancel the rating or endorsement.

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

61.185 New licence document if licence, rating or endorsement cancelled

(1) This regulation applies if:

(a) the holder of a multi-crew pilot licence with an aeroplane category rating is authorised, without holding an instrument rating, to pilot an aeroplane in a multi-crew operation:
  (i) under the IFR; or
  (ii) at night under the VFR; and
(b) the holder of an air transport pilot licence with an aeroplane category rating is authorised, without holding an instrument rating, to pilot an aeroplane:
  (i) under the IFR; or
  (ii) at night under the VFR; and
(c) the holder of an air transport pilot licence with a powered-lift category rating is authorised, without holding an instrument rating, to pilot a powered-lift aircraft:
  (i) under the IFR; or
  (ii) at night under the VFR.

Table 61.375 Activities for which ratings are required

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

Regulation 61.380

Table 61.375 Activities for which ratings are required

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

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

(1) The holder of a pilot licence is authorised to conduct a flight activity mentioned in column 2 of an item in table 61.1145 only if the holder also holds the endorsement mentioned in column 1 of the item.

(2) The holder of a pilot licence is authorised to exercise the privileges of the licence in an aircraft that has a design feature mentioned in regulation 61.755 for the aircraft only if the holder also holds the design feature endorsement for the design feature.

61.385 Limitations on exercise of privileges of pilot licences—general competency requirement

(1) The holder of a pilot licence is authorised to exercise the privileges of the licence in an aircraft only if the holder is competent in operating the aircraft to the standards mentioned in the Part 61 Manual of Standards for the class or type to which the aircraft belongs, including in all of the following areas:

(a) operating the aircraft's navigation and operating systems;

(b) conducting all normal, abnormal and emergency flight procedures for the aircraft;

(c) applying operating limitations;

(d) weight and balance requirements;

(e) applying aircraft performance data, including take-off and landing performance data, for the aircraft.

(1A) Subregulation (1B) applies if the holder of a pilot licence also holds an operational rating or endorsement.

(1B) The holder is authorised to exercise the privileges of his or her pilot licence in an activity in an aircraft under the rating or endorsement only if the holder is competent in operating the aircraft in the activity to the standards mentioned in the Part 61 Manual of Standards (if any) for:

(a) the class or type to which the aircraft belongs; and

(b) the activity.

(2) The holder of a pilot licence is authorised to exercise the privileges of the licence in an aircraft that has an operative airborne collision avoidance system only if the holder is competent in the use of an airborne collision avoidance system to the standards mentioned in the Part 61 Manual of Standards.

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

(1) The holder of a pilot licence is not authorised to conduct an activity in the exercise of the privileges of the licence in an aircraft if:

(a) engaging in the activity is a prescribed purpose for subsection 27(9) of the Act; and

(b) the operator of the aircraft does not hold an AOC that authorises the conduct of the activity.

(2) The holder of a pilot licence is not authorised to conduct an activity in the exercise of the privileges of the licence if the conduct of the activity would be an offence against the Act or another provision of these Regulations.

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

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

(a) at least 3 take-offs; and

(b) at least 3 landings;

while controlling the aircraft or flight simulator.

(2) The holder of a pilot licence is authorised to pilot, during take-off or landing, an aircraft of a particular category carrying a passenger at night only if the holder has, within the previous 90 days, in an aircraft of that category or an approved flight simulator for the purpose, conducted, at night:

(a) at least 3 take-offs; and

(b) at least 3 landings;

while controlling the aircraft or flight simulator.

(3) For paragraphs (1)(a) and (2)(a), each take-off must be followed by a climb to at least 500 ft AGL.

(4) The holder is taken to meet the requirements of subregulation (1) if:

(a) within the previous 90 days, in an aircraft of that category or an approved flight simulator for the purpose, the holder has:

(i) successfully completed a relevant check or review; or

(ii) passed a flight test for a pilot licence or a rating on a pilot licence;

that includes at least one take-off and at least one landing; or

(b) both:

(i) the holder is successfully participating in an operator's training and checking system for an operation in an aircraft of that category; and

(ii) the operator holds an approval under regulation 61.040 for the system for this subregulation and operations in aircraft of that category.

(5) Also, the holder is taken to meet the requirements of subregulation (2) if:

(a) within the previous 90 days, in an aircraft of that category or an approved flight simulator for the purpose, the holder has:

(i) successfully completed a relevant check or review; or

(ii) passed a flight test for a pilot licence or a rating on a pilot licence;

that includes at least one take-off, and at least one landing, at night; or

(b) both:

(i) the holder is successfully participating in an operator's training and checking system for an operation at night in an aircraft of that category; and

(ii) the operator holds an approval under regulation 61.040 for the system for this subregulation and operations in aircraft of that category.

(6) In this regulation:

relevant check or review means any of the following:

(a) an instrument proficiency check;

(b) a night vision imaging system proficiency check;

(c) an instructor proficiency check;

(d) an operator proficiency check;

(e) a flight review.

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

(1) For this Part, successful completion of a flight review for a rating on a pilot licence requires demonstration, to a person mentioned in subregulation (2), that the holder of the rating is competent in each unit of competency mentioned in the Part 61 Manual of Standards for the rating.

(2) For subregulation (1), the persons are as follows:

(a) CASA;

(b) the holder of an approval under regulation 61.040 for this regulation;

(c) a pilot instructor who is authorised to conduct a flight review for the rating.

(3) The flight review must be conducted in:

(a) an aircraft that can be flown under the rating; or

(b) an approved flight simulator for the flight review.

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

(1) The holder of a recreational pilot licence is authorised to exercise the privileges of the licence only if:

(a) the holder also holds a current class 1 or 2 medical certificate; or

(b) the holder:

(i) also holds a current recreational aviation medical practitioner's certificate; and

(ii) meets the requirements mentioned in subregulation (2); or

(c) the holder also holds a medical exemption for the exercise of the privileges of the licence.

(2) For subparagraph (1)(b)(ii), the requirements are as follows:

(a) the holder must have:

(i) given CASA a copy of the holder's recreational aviation medical practitioner's certificate; and

(ii) received from CASA a written acknowledgement of the receipt of the copy;

(b) while exercising the privileges of the licence in an aircraft, the holder must carry both of the following on the aircraft:

(i) the certificate;

(ii) the acknowledgement mentioned in subparagraph (a)(ii);

(c) the holder must comply with any limitations or conditions stated on the certificate;

(d) the holder must meet the modified Austroads medical standards.

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

(3) In this regulation:

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

(a) the period beginning on the day the certificate was signed by the medical practitioner and ending 24 months after that day;

(b) if, when the holder exercises the privileges of the licence, the holder is at least 65—the period beginning on the day the certificate was signed by the medical practitioner and ending 12 months after that day;

(c) if the certificate states the period for which it applies—the period beginning on the day the certificate was signed by the medical practitioner and ending at the end of the stated period.

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

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

(1) The holder of a private pilot licence is authorised to exercise the privileges of the licence only if the holder also holds:

(a) a current class 1 or 2 medical certificate; or

(b) a medical exemption for the exercise of the privileges of the licence.

(2) However, subject to subregulation (3), the holder of a private pilot licence is authorised to exercise the privileges of the licence in a recreational aircraft if:

(a) the holder:

(i) also holds a current recreational aviation medical practitioner's certificate; and

(ii) meets the requirements mentioned in subregulation 61.405(2); and

(b) the flight is conducted by day under the VFR.

(3) Regulation 61.465 applies to the holder as if each reference in that regulation to a recreational pilot licence included a reference to a private pilot licence.

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

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

(1) The holder of a commercial pilot licence, multi-crew pilot licence or air transport pilot licence is authorised to exercise the privileges of the licence only if the holder also holds:

(a) a current class 1 medical certificate; or

(b) a medical exemption for the exercise of the privileges of the licence.

(2) However, the holder of a commercial pilot licence or air transport pilot licence is authorised to exercise the privileges of the licence in an activity that would be authorised by a private pilot licence if the holder also holds a current class 2 medical certificate.

(3) Also, the holder of a commercial pilot licence or air transport pilot licence is authorised to exercise the privileges of the licence in an activity that would be authorised by a recreational pilot licence if the holder:

(a) also holds a current recreational aviation medical practitioner's certificate; and

(b) meets the requirements mentioned in subregulation 61.405(2).

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

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

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

(a) his or her licence document;

(b) if the holder holds a current class 1 or 2 medical certificate—the medical certificate;

(c) if the holder holds a recreational aviation medical practitioner's certificate:

(i) the medical practitioner's certificate; and

(ii) the acknowledgement of receipt mentioned in paragraph 61.405(2)(a);

(ca) if the holder holds a medical exemption for the flight—a copy of the medical exemption;

(d) a document that includes a photograph of the holder showing the holder's full face and his or her head and shoulders:

(i) that was issued within the previous 10 years by the government, or a government authority, of:

(A) the Commonwealth or a State or Territory; or

(B) a foreign country, or a state or province (however described) of a foreign country; and

(ii) that has not expired or been cancelled.

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

(1) The holder of a pilot licence other than a recreational pilot licence is authorised to exercise the privileges of the licence only if the holder has a current aviation English language proficiency assessment.

(2) Subregulation (3) applies to the holder of a pilot licence that was granted on the basis of regulation 202.272 if the licence was granted in recognition of an old authorisation (within the meaning of regulation 202.261) that was granted on or before 4 March 2008.

(3) Subregulation (1) does not apply to the holder in relation to the exercise of the privileges of his or her licence in Australian Territory.

61.425 Limitations on exercise of privileges of pilot licences—unregistered aircraft

The holder of a pilot licence is authorised to pilot an aircraft only if the aircraft is registered.

61.427 Removal of certain pilot licence conditions about airspace

(1) Subregulation (2) applies to a pilot licence granted on the basis of regulation 202.272 or 202.274 if the licence is subject to the condition that operations are limited to:

(a) flight within 25 nautical miles of the departure aerodrome; or

(b) flight within a flight training area; or

(c) flight direct between the departure aerodrome and a flight training area.

(2) CASA must remove the condition if:

(a) the licence holder applies to CASA for the removal of the condition; and

(b) the licence holder meets the requirements under this Part for the grant of a private pilot licence or a commercial pilot licence.

(3) Subregulation (4) applies to a pilot licence granted on the basis of regulation 202.272 or 202.274 if the licence is subject to the condition that operations as pilot in command are limited to uncontrolled airspace and any

other class of airspace endorsed in the licence holder's personal log book by an instructor before 1 September 2014.

(4) CASA must remove the condition if:

(a) the licence holder applies to CASA for the removal of the condition; and

(b) the licence holder meets the requirements under this Part for the grant of any of the following:

(i) a controlled airspace endorsement;

(ii) a private pilot licence;

(iii) a commercial pilot licence.

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

61.430 Holders of pilot licences authorised to taxi aircraft

(1) A person is authorised to taxi an aircraft of a particular class or type if the person holds:

(a) a pilot licence; and

(b) the category rating for the category to which aircraft of that class or type belong; and

(c) the class rating or type rating for aircraft of that class or type.

(2) For regulations 61.405 to 61.415, taxiing an aircraft does not constitute the exercise of the privileges of a licence.

Note: See regulation 91.415 for an offence relating to taxiing aircraft without being authorised to do so.

61.435 When holders of pilot licences authorised to operate aircraft radio

(1) A person is authorised to transmit on an aviation safety radio frequency if the person:

(a) holds a private pilot licence, commercial pilot licence, multi-crew pilot licence or air transport pilot licence; or

(b) holds a recreational pilot licence with a flight radio endorsement.

(3) For regulations 61.405 to 61.415, transmitting on an aviation safety radio frequency does not constitute the exercise of the privileges of a licence.

Note 1: A person is prohibited from transmitting on an aviation safety radio frequency unless the person is authorised or qualified to do so: see regulation 91.625.

Note 2: For the definition of ***aviation safety radio frequency***, see the Dictionary.

Subpart 61.G—Recreational pilot licences

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

61.460 Privileges of recreational pilot licences

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

(a) the aircraft is certificated for single-pilot operation; and

(b) the aircraft has a maximum certificated take-off weight of not more than 1 500 kg; and

(c) the aircraft is not rocket-powered or turbine-powered; and

(d) the flight is conducted by day under the VFR; and

(e) either:

(i) the aircraft is engaged in a private operation; or

(ii) the holder is receiving flight training.

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

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

Note 3: The holder of a recreational pilot licence is also authorised to transmit on an aviation safety radio frequency if the holder also holds a flight radio endorsement: see regulation 61.435.

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

(1) The holder of a recreational pilot licence is authorised to pilot an aircraft in a Contracting State's airspace only if the holder has the permission (however described) of the Contracting State to do so.

(2) The holder of a recreational pilot licence is authorised to pilot an aircraft carrying more than one passenger only if the holder:

(a) also holds a current class 1 or 2 medical certificate; or

(b) is accompanied by another pilot who:

(i) holds a current class 1 or 2 medical certificate; and

(ii) occupies a flight control seat in the aircraft; and

(iii) is authorised to pilot the aircraft.

(3) The holder of a recreational pilot licence is authorised to pilot an aircraft above 10 000 ft above mean sea level only if the holder:

(a) also holds a current class 1 or 2 medical certificate; or

(b) is accompanied by another pilot who:

(i) holds a current class 1 or 2 medical certificate; and

(ii) occupies a flight control seat in the aircraft; and
(iii) is authorised to pilot the aircraft.

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

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

(2) The holder of a recreational pilot licence is authorised to pilot an aircraft in controlled airspace only if the holder also holds a controlled airspace endorsement.

(3) The holder of a recreational pilot licence is authorised to pilot an aircraft at a controlled aerodrome only if the holder also holds a controlled aerodrome endorsement.

61.475 Requirements for grant of recreational pilot licences

(1) An applicant for a recreational pilot licence must be at least 16.

(2) Subject to regulation 61.480, the applicant must also have:
(a) passed the aeronautical knowledge examination for a recreational pilot licence and the associated aircraft category rating; and
(b) completed flight training for a recreational pilot licence and the associated aircraft category rating; and
(c) passed the flight test mentioned in the Part 61 Manual of Standards for a recreational pilot licence and the associated aircraft category rating; and
(d) completed at least 25 hours of flight time as pilot of an aircraft of the category for which the associated aircraft category rating is sought, including:
(i) at least 20 hours of dual flight; and
(ii) at least 5 hours of solo flight time.

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

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

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

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

(3) Despite paragraph 61.245(1)(a), the flight test must be conducted in an aircraft.

(4) The applicant is taken to meet the requirements of subregulation (2) if the applicant holds a private pilot licence, commercial pilot licence or air transport pilot licence.

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

(1) This regulation applies to an applicant for a recreational pilot licence if:
   (a) the applicant holds a pilot certificate, granted by a sport aviation body that administers activities involving aircraft of a particular category; and
   (b) the certificate permits the holder to act as the pilot in command of an aircraft of that category.

(2) For subregulation 61.475(2), the applicant is taken to have passed:
   (a) the aeronautical knowledge examination; and
   (b) the flight test;

   for the licence and the associated aircraft category rating.

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

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

Division 61.G.2—Recreational pilot licence endorsements

61.485 Kinds of recreational pilot licence endorsements

The following are recreational pilot licence endorsements:

(a) a controlled aerodrome endorsement;

(b) a controlled airspace endorsement;

(c) a flight radio endorsement;

(d) a recreational navigation endorsement.

61.490 Privileges of recreational pilot licence endorsements

(1) Subject to Subpart 61.E, the holder of a recreational pilot licence with a controlled aerodrome endorsement is authorised to pilot an aircraft, as pilot in command, at a controlled aerodrome.

(2) Subject to Subpart 61.E, the holder of a recreational pilot licence with a controlled airspace endorsement is authorised to pilot an aircraft, as pilot in command, in controlled airspace.

(3) Subject to Subpart 61.E, the holder of a recreational pilot licence with a flight radio endorsement is authorised to operate an aircraft radio on the ground or in flight to transmit on an aviation safety radio frequency.

(4) Subject to Subpart 61.E, the holder of a recreational pilot licence with a recreational navigation endorsement is authorised to pilot an aircraft, as pilot in command, on a cross-country flight.

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

61.495 Requirements for grant of recreational pilot licence endorsements

(1) This regulation applies to a person other than a person who is eligible to be granted a recreational pilot licence endorsement under regulation 61.500.

(2) An applicant for a recreational pilot licence endorsement must:

(a) have passed the aeronautical knowledge examination for the endorsement; and

(b) have completed flight training for the endorsement; and

(c) if the endorsement is a recreational navigation endorsement—have completed, in addition to the flight time mentioned in paragraph 61.475(2)(d), at least 5 hours of solo cross-country flight time; and

(d) if the endorsement is a flight radio endorsement—have a current aviation English language proficiency assessment.

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

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

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

61.500 Grant of endorsement in recognition of other qualifications

(1) An applicant for a recreational pilot licence endorsement is eligible to be granted the endorsement if the applicant:
  (a) holds a recreational pilot licence; and
  (b) holds another flight crew licence that authorises the exercise of the privileges of the endorsement.

(2) An applicant for a controlled aerodrome endorsement is eligible to be granted the endorsement if:
  (a) regulation 61.480 applies to the applicant; and
  (b) the applicant holds an approval from the sport aviation body to pilot an aircraft at a controlled aerodrome.

(3) An applicant for a controlled airspace endorsement is eligible to be granted the endorsement if:
  (a) regulation 61.480 applies to the applicant; and
  (b) the applicant holds an approval from the sport aviation body to pilot an aircraft in controlled airspace.

(4) An applicant for a flight radio endorsement is eligible to be granted the endorsement if:
  (a) regulation 61.480 applies to the applicant; and
  (b) the applicant holds an approval from the sport aviation body to operate an aircraft radio; and
  (c) the applicant has a current aviation English language proficiency assessment.

(5) An applicant for a recreational navigation endorsement is eligible to be granted the endorsement if:
  (a) regulation 61.480 applies to the applicant; and
  (b) the applicant holds a cross-country navigation approval from the sport aviation body; and
  (c) the applicant has completed at least 5 hours of solo cross-country flight time that complies with subregulation 61.495(3).

Subpart 61.H—Private pilot licences

Division 61.H.1—General

61.505 Privileges of private pilot licences

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

(a) the aircraft is engaged in a private operation; or

(b) the holder is receiving flight training.

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

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

Note 3: The holder of a private pilot licence is also authorised to transmit on an aviation safety radio frequency: see regulation 61.435.

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

(1) On and after 1 September 2015, the holder of a private pilot licence is authorised to exercise the privileges of the licence in a multi-crew operation only if the holder has completed an approved course of training in multi-crew cooperation.

(2) The holder of a private pilot licence that was granted on the basis of regulation 202.272 is taken to meet the requirement mentioned in subregulation (1) if, before 1 September 2015, the holder conducted a multi-crew operation.

61.515 Requirements for grant of private pilot licences—general

(1) An applicant for a private pilot licence must be at least 17.

(2) The applicant must also have:

(a) passed the aeronautical knowledge examination for the private pilot licence and the associated aircraft category rating; and

(b) completed flight training for the private pilot licence and the associated aircraft category rating; and

(c) passed the flight test mentioned in the Part 61 Manual of Standards for the private pilot licence and the associated aircraft category rating; and

(d) met the aeronautical experience requirements mentioned in Division 61.H.2 or 61.H.3.

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

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

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

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

(3) Despite paragraph 61.245(1)(a), the flight test must be conducted in an aircraft.

(4) An applicant who meets the requirements for the grant of a commercial pilot licence is taken to meet the requirements for the grant of a private pilot licence.

Division 61.H.2—Aeronautical experience requirements for private pilot licences—applicants who have completed integrated training courses

61.520 Application of Division 61.H.2

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

61.525 Aeronautical experience requirements for grant of private pilot licences—aeroplane category

(1) An applicant for a private pilot licence with the aeroplane category rating must have at least 35 hours of aeronautical experience that includes:
  (a) at least 30 hours of flight time as a pilot; and
  (b) at least 20 hours of flight time as pilot of an aeroplane; and
  (c) at least 10 hours of solo flight time in an aeroplane; and
  (d) at least 5 hours of solo cross-country flight time in an aeroplane; and
  (e) at least 2 hours of dual instrument time; and
  (f) at least one hour of dual instrument flight time in an aeroplane.

(2) Any of the required aeronautical experience that is not completed as flight time as a pilot must be completed as simulated flight time in an approved flight simulation training device for the purpose.

(3) The cross-country flight time required by paragraph (1)(d) must include a flight of at least 150 nautical miles during which a full-stop landing is made at each of 2 aerodromes not within the flight training area for the aerodrome from which the flight began.

(4) The flight time in an aeroplane required by subregulation (1) must be completed in a registered or recognised aeroplane.

61.530 Aeronautical experience requirements for grant of private pilot licences—helicopter category

(1) An applicant for a private pilot licence with the helicopter category rating must have at least 35 hours of aeronautical experience that includes:
  (a) at least 30 hours of flight time as pilot of a helicopter; and
  (b) at least 10 hours of solo flight time in a helicopter; and
  (c) at least 5 hours of solo cross-country flight time in a helicopter; and
  (d) at least 2 hours of dual instrument time; and
  (e) at least one hour of dual instrument flight time in a helicopter.

(2) Any of the required aeronautical experience that is not completed as flight time as a pilot must be completed as:

(a) pressurisation system;
(b) gas turbine engine.

61.760 Privileges of design feature endorsements

Subject to Subpart 61.E, the holder of a design feature endorsement is authorised to exercise the privileges of his or her pilot licence in an aircraft that:

(a) has that design feature; and
(b) is:
  (i) of a class for which the holder holds an aircraft class rating; or
  (ii) of a type for which the holder holds an aircraft type rating.

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

61.765 Requirements for grant of design feature endorsements

(1) An applicant for a design feature endorsement must:
  (a) hold an aircraft class rating that covers an aircraft with the design feature; and
  (b) either:
    (i) have passed the flight test for the class rating in an aircraft with the design feature; or
    (ii) have completed flight training for the endorsement.

Note 1: For paragraph (a), paragraph (a) is satisfied if the applicant holds a certificate of validation of an overseas flight crew licence, rating or endorsement that is equivalent to the rating: see item 36 of Part 2 of the Dictionary.

Note 2: For subparagraph (b)(i), for the conduct of flight tests, see Division 61.B.4.

Note 3: For subparagraph (b)(ii), for the requirements for flight training, see Division 61.B.2.

(2) A pilot who holds a type rating for an aircraft that has a design feature mentioned for the aircraft in regulation 61.755 is taken to meet the requirements of subregulation (1) for that design feature.

Note: Subregulation (2) is satisfied if the applicant holds a certificate of validation of an overseas flight crew licence, rating or endorsement that is equivalent to the rating: see item 36 of Part 2 of the Dictionary.

Division 61.L.5—Pilot type ratings

61.770 Privileges of pilot type ratings

Subject to Subpart 61.E and regulations 61.775 to 61.805, the holder of a pilot licence and a pilot type rating is authorised to exercise the privileges of the licence in an aircraft of the type covered by the rating.

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

Note 2: The aircraft types for which pilot type ratings may be granted are set out in legislative instruments under regulations 61.055 (multi-crew aircraft) and 61.060 (single-pilot aircraft).

61.775 Limitations on exercise of privileges of pilot type ratings—flight test in flight simulator

(1) This regulation applies to the holder of a pilot type rating for a type rated aircraft that is a multi-engine turbine-powered aircraft if the holder passed the flight test for the rating in a flight simulator.

(2) The holder is authorised to exercise the privileges of the rating as pilot in command only if the holder has at least 25 hours of flight time as pilot of an aircraft covered by the rating.

(3) The holder is taken to meet the requirements of subregulation (2) if the holder has:

(a) for a type rating for a turbojet-powered aeroplane:
  (i) at least 1 000 hours of flight time as pilot of a turbojet-powered aeroplane; or
  (ii) at least 2 000 hours of flight time, including at least 500 hours of flight time as pilot of a turbojet-powered aeroplane; or

(b) for a type rating for a turboprop-powered aeroplane:
  (i) at least 1 000 hours of flight time as pilot of a turboprop-powered aeroplane; or
  (ii) at least 2 000 hours of flight time, including at least 500 hours of flight time as pilot of a turboprop-powered aeroplane; or

(c) for a type rating for a turbine-powered helicopter:
  (i) at least 1 000 hours of flight time as pilot of a turbine-powered helicopter; or
  (ii) at least 2 000 hours of flight time, including at least 500 hours of flight time as pilot of a turbine-powered helicopter; or

(d) for a type rating for a powered-lift aircraft:
  (i) at least 1 000 hours of flight time as pilot of a multi-engine turbine-powered helicopter or powered-lift aircraft; or

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Penalty: 50 penalty units.

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

(2) Despite subregulation (1), a pregnant woman who holds an ATC licence may continue to exercise the privileges of the licence until the end of the 38th week of gestation if:

(a) the medical practitioner who is attending the woman certifies her continued medical fitness to do so each week beginning at the 31st week of gestation; and

(b) a DAME certifies the woman's continuing fitness to do so each week beginning at the 31st week of gestation; and

(c) another person who holds an ATC licence, and is medically fit and able to take over responsibility for the function, is on duty and available at the times when she does so.

67.240 Medical certificates—suspension pending examination

(1) If CASA directs the holder of a medical certificate to submit to an examination under regulation 67.230, or to authorise the disclosure of information to CASA under that regulation, CASA may, in writing, suspend the medical certificate.

(2) If CASA suspends a medical certificate, CASA must give the holder of the certificate written notice of the suspension and of the reasons for the suspension.

(3) A suspension of a medical certificate takes effect when the holder of the certificate is told of the suspension, either orally or in writing.

(4) If:

(a) CASA suspends a medical certificate; and

(b) the holder of the certificate submits to an examination or test directed by CASA, or authorises the disclosure of information to CASA; and

(c) the examination, test or information shows that:

(i) the holder meets the relevant medical standard; and

(ii) the continued holding of the certificate by the holder will not adversely affect the safety of air navigation;

CASA must:

(d) end the suspension; and

(e) tell the holder in writing that the suspension has ended.

(5) If:

(a) CASA suspends a medical certificate; and

(b) the holder of the certificate submits to an examination or test directed by CASA, or authorises the disclosure of information to CASA; and

(c) the examination, test or information shows either or both of the following:

(i) the holder fails to meet the relevant medical standard;

(ii) the continued holding of the certificate by the holder will adversely affect the safety of air navigation;

CASA must tell the holder in writing the respect in which the holder does not meet the medical standard.

Regulation 67.245

67.245 Suspension of medical certificates—special arrangements for service in urgent cases

(1) If there is reason to believe in a particular case that:
   (a) the holding of a medical certificate by a person may seriously and adversely affect the safety of air navigation; and
   (b) it is necessary, in the interests of the safety of air navigation, to suspend the certificate immediately; and
   (c) the person is likely to attempt to evade service on him or her of the notice of suspension;

   CASA may give the notice to the person in any way by which it is likely to be quickly brought to the person's attention.

(2) In particular, if no other method of giving the notice is practicable in the circumstances, the notice may be given by fixing it in a prominent position to an aircraft that the person is likely to fly.

(3) A notice that is fixed to an aircraft is taken to have been given to the person at the time it is fixed to the aircraft.

67.250 Medical certificates—effect of suspension

If CASA suspends a medical certificate, its holder is taken not to be the holder of a medical certificate during the period of the suspension.

67.255 Medical certificates—cancellation if medical standard not met

(1) If, after undergoing an examination for the purposes of regulation 67.180 or under regulation 67.230, the holder of a medical certificate fails to meet the relevant medical standard for the certificate (or, in the case of a person who did not, at the time the certificate was issued, meet the standard in all respects, fails to meet the standard in an additional respect), CASA must:
   (a) by written notice given to the holder, cancel the certificate; and
   (b) if CASA is satisfied that the holding of a medical certificate by the holder will not adversely affect the safety of air navigation—issue to the holder a medical certificate that is subject to any conditions that are necessary in the interests of the safety of air navigation.

(2) CASA must include in the notice the reasons for the holder's failure to meet the relevant medical standard.

67.260 Medical certificates—cancellation and suspension in other cases

(1) CASA may, by written notice given to the holder of a medical certificate, cancel the certificate, or suspend it for a specified period, if there are reasonable grounds for believing that the holder:
   (a) has contravened a condition to which the certificate is subject; or
   (b) has contravened subregulation 67.265(3) or (4); or
   (c) has failed to comply with a direction under regulation 67.230.

(c) the condition has the result that his or her ability to do an act authorised by the licence is impaired;

he or she must not do the act until a DAME certifies that the holder can safely do such acts.

Penalty: 50 penalty units.

Note: If the holder of a medical certificate tells a DAME about a medically significant condition, and the condition is safety-relevant, the DAME must tell CASA in writing of that fact within 5 working days—see regulation 67.125.

(6) It is a defence to a prosecution under subregulation (5) that, in the circumstances, the relevant act was a reasonable measure to save life (including the holder's own life) or avoid damage to property.

67.270 Offence—doing act while efficiency impaired—licence holders

(1) This regulation applies in relation to the following licences:
(a) a flight crew licence;
(b) a balloon flight crew licence within the meaning of subregulation 5.01(1) of CAR;
(c) an ATC licence.

(2) The holder commits an offence if:
(a) the holder does an act authorised by the licence; and
(b) at the time of doing the act:
(i) the holder knows that he or she has a medically significant condition; and
(ii) the condition has the result that the holder's ability to do the act is impaired.

Penalty: 50 penalty units.

Class 1 medical certificates

(3) The holder commits an offence if:
(a) the holder does an act authorised by the licence; and
(b) the holder knows that he or she has had a condition mentioned in paragraph (2)(b); and
(c) the holder's normal ability to do the act is not fully restored within 7 days after the holder first becomes aware that he or she had the condition; and
(d) the holder is authorised to do the act only if the holder also holds a class 1 medical certificate; and
(e) the holder has not been given a certificate by a DAME to the effect that the holder's normal ability to do the act is no longer impaired.

Penalty: 50 penalty units.

Regulation 67.271

Class 2 and 3 medical certificates

(4) The holder commits an offence if:
  (a) the holder does an act authorised by the licence; and
  (b) the holder knows that he or she has had a condition mentioned in paragraph (2)(b); and
  (c) the holder's normal ability to do the act is not fully restored within 30 days after the holder first becomes aware that he or she had the condition; and
  (d) the holder is authorised to do the act only if the holder also holds a class 1, 2 or 3 medical certificate; and
  (e) the holder has not been given a certificate by a DAME to the effect that the holder's normal ability to do the act is no longer impaired.

Penalty: 50 penalty units.

Recreational aviation medical practitioner's certificates

(5) The holder commits an offence if:
  (a) the holder does an act authorised by the licence; and
  (b) the holder knows that he or she has had a condition mentioned in paragraph (2)(b); and
  (c) the holder's normal ability to do the act is not fully restored within 30 days after the holder first becomes aware that he or she had the condition; and
  (d) the holder is authorised to do the act only if the holder also holds a class 1, 2 or 3 medical certificate or a recreational aviation medical practitioner's certificate; and
  (e) the holder does not meet the requirement in subregulation (6).

Penalty: 50 penalty units.

(6) For paragraph (5)(e), the requirement is that:
  (a) the holder has been given a certificate by a DAME to the effect that the holder's normal ability to do the act is no longer impaired; or
  (b) if the holder held a recreational aviation medical practitioner's certificate at the time the holder had the condition—the holder is:
    (i) assessed by a medical practitioner as meeting the modified Austroads medical standards after having the condition; and
    (ii) given a certificate by the medical practitioner to that effect.

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

67.271 Offence—doing act while efficiency impaired—student pilots

(1) A student pilot commits an offence if:
  (a) the student pilot conducts a solo flight or takes a flight test; and
  (b) at the time of the solo flight or flight test:
    (i) the student pilot knows that he or she has a medically significant condition; and

(ii) the condition has the result that the student pilot's ability to conduct the solo flight or take the flight test is impaired.

Penalty: 50 penalty units.

(2) A student pilot commits an offence if:

(a) the student pilot conducts a solo flight or undertakes a flight test; and

(b) the student pilot knows that he or she has had a condition mentioned in paragraph (1)(b); and

(c) the student pilot's normal ability to conduct the solo flight or undertake the flight test is not fully restored within 30 days after the student pilot first becomes aware that he or she had the condition; and

(d) the student pilot does not meet the requirement in subregulation (3).

Penalty: 50 penalty units.

(3) For paragraph (2)(d), the requirement is that:

(a) the student pilot has been given a certificate by a DAME to the effect that the student pilot's ability to conduct a solo flight or undertake a flight test is no longer impaired; or

(b) if the student pilot held a recreational aviation medical practitioner's certificate at the time the student had the condition—the student pilot is:

(i) assessed by a medical practitioner as meeting the modified Austroads medical standards after having the condition; and

(ii) given a certificate by the medical practitioner to that effect.

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

67.275 Surrender of medical certificates

(1) CASA may require, by written notice, the holder of a medical certificate to surrender the certificate to CASA within a reasonable time specified in the notice.

(2) The person must comply with the requirement.

Penalty: 5 penalty units.

(3) A person who contravenes subregulation (2) is guilty of an offence in respect of each day during which the person refuses or fails to comply with the requirement, including the day of any conviction for such an offence.

(4) The person must not destroy, mutilate or deface the certificate with intent to evade the obligation to comply with the requirement.

Penalty: 10 penalty units.

Part 71—Airspace

Note: This Part heading is reserved for future use.

(a) a VFR flight conducted by day and within 50 nautical miles of the aircraft's point of departure; or

(b) a flight conducted:

(i) within the flying training area for an aerodrome; and

(ii) if the flying training area for the aerodrome is not adjacent to the aerodrome—along the flight path between the flying training area and the aerodrome.

(2) The pilot in command of an aircraft for a flight contravenes this subregulation if, when the flight begins, a document mentioned in subregulation (3) is not carried on the aircraft.

(3) The documents are as follows:

(a) the authorised aeronautical information for the flight;

(b) the flight technical log or maintenance release for the aircraft.

(4) A person commits an offence of strict liability if the person contravenes subregulation (2).

Penalty: 25 penalty units.

91.115 Carriage of documents—flights that begin or end outside Australian territory

(1) This regulation applies in relation to a flight of an aircraft that begins or ends at an aerodrome outside Australian territory.

(2) The pilot in command of an aircraft for a flight contravenes this subregulation if, when the flight begins, a document mentioned in subregulation (3) is not carried on the aircraft.

(3) The documents are as follows:

(a) the aircraft's certificate of airworthiness;

(b) the aircraft's certificate of registration;

(c) the journey log for the flight mentioned in regulation 91.120;

(d) a list including the name, place of embarkation and place of destination of each passenger on the aircraft;

(e) if the aircraft is carrying cargo (other than passenger baggage)—a manifest and detailed declaration of the cargo;

(f) if the aircraft has a radio station licence that is an apparatus licence or a class licence—a copy of the licence;

(g) if the operator or pilot in command of the aircraft holds an approval under regulation 91.045 or holds another civil aviation authorisation that is relevant to the flight—a copy of the approval or authorisation.

(4) A person commits an offence of strict liability if the person contravenes subregulation (2).

Penalty: 25 penalty units.

91.120 Journey logs—flights that begin or end outside Australian territory

(1) This regulation applies to a flight of an aircraft that begins or ends at an aerodrome outside Australian territory.

(2) The operator and the pilot in command of an aircraft for a flight each contravene this subregulation if:

(a) the Part 91 Manual of Standards prescribes requirements relating to maintaining a journey log for the flight; and

(b) the requirements are not met for the flight.

(3) A person commits an offence of strict liability if the person contravenes subregulation (2).

Penalty: 25 penalty units.

Division 91.C.4—Reporting and recording defects and incidents etc.

Note: This Division is reserved for future use.

Division 91.C.8—Portable electronic devices

91.170 Operation of portable electronic devices

(1) The pilot in command of an aircraft for a flight contravenes this subregulation if:
  (a) the pilot in command permits a person to operate a portable electronic device during the flight; and
  (b) the pilot in command does not determine that the operation of the device during the flight will not affect the safety of the aircraft.

(2) A person on an aircraft for a flight contravenes this subregulation if:
  (a) during the flight, the person operates a portable electronic device; and
  (b) the person has been directed by the pilot in command, or instructed by a cabin crew member, not to operate the portable electronic device during the flight.

(3) A person commits an offence of strict liability if the person contravenes subregulation (1) or (2).

  Penalty: 50 penalty units.

91.175 Operation of portable electronic devices by crew members

(1) A crew member for a flight of an aircraft contravenes this subregulation if:
  (a) the crew member operates a portable electronic device at a time during the flight; and
  (b) operating the device at that time is likely to distract the crew member from performing the crew member's duties for the flight.

(2) A person commits an offence of strict liability if the person contravenes subregulation (1).

  Penalty: 50 penalty units.

(b) none of the circumstances mentioned in subregulation (3) applies.

Note: This regulation does not apply to certain medical transport operations in a rotorcraft and certain aerial work operations: see regulations 133.167 and 138.275.

(2) The minimum height is the lowest height of the following for the route or route segment:

(a) the published lowest safe altitude for the route or route segment (if any);

(b) the minimum sector altitude published in the authorised aeronautical information for the flight (if any);

(c) the lowest safe altitude for the route or route segment;

(d) 1,000 ft above the highest obstacle on the ground or water within 10 nautical miles ahead of, and to either side of, the aircraft at that point on the route or route segment;

(e) the lowest altitude for the route or route segment calculated in accordance with a method prescribed by the Part 91 Manual of Standards for the purposes of this paragraph.

(3) The circumstances are the following:

(a) the aircraft is taking off or landing;

(b) the aircraft is within 3 nautical miles of the aerodrome from which the aircraft has taken off, or at which the aircraft will land;

(c) the aircraft is being flown in accordance with an air traffic control clearance.

(4) A person commits an offence of strict liability if the person contravenes subregulation (1).

Penalty: 50 penalty units.

91.280 VFR flights—compliance with VMC criteria

(1) The pilot in command of an aircraft for a VFR flight contravenes this subregulation if, during the flight, the aircraft is not flown in accordance with a requirement of the VMC criteria for the aircraft and the airspace in which the flight is conducted.

(2) Subregulation (1) does not apply to a flight of an aircraft if:

(a) air traffic control has authorised the pilot in command of the aircraft to conduct the flight under the special VFR; and

(b) the pilot in command complies with the special VFR.

(3) A person commits an offence of strict liability if the person contravenes subregulation (1).

Penalty: 50 penalty units.

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

91.283 VFR flights—aircraft not to exceed certain speeds

(1) The pilot in command of an aircraft for a VFR flight contravenes this subregulation if, during the flight, the aircraft is flown at a transonic or supersonic speed.

(2) A person commits an offence of strict liability if the person contravenes subregulation (1).

Penalty: 50 penalty units.

91.285 VFR flights—flights in class A airspace

(1) The pilot in command of an aircraft for a VFR flight contravenes this subregulation if, during the flight:
(a) the aircraft is flown in class A airspace; and
(b) the pilot in command does not hold an approval under regulation 91.045 to conduct a VFR flight in class A airspace.

(2) A person commits an offence of strict liability if the person contravenes subregulation (1).

Penalty: 50 penalty units.

Subdivision 91.D.4.3—Instrument flight rules

91.287 IFR flights

(1) The Part 91 Manual of Standards may prescribe requirements relating to the operation of an aircraft for an IFR flight.

(2) The pilot in command of an aircraft for an IFR flight contravenes this subregulation if a requirement mentioned in subregulation (1) is not met for the flight.

(3) A person commits an offence of strict liability if the person contravenes subregulation (2).

Penalty: 50 penalty units.

91.290 Specified IFR cruising levels

(1) The pilot in command of an aircraft for an IFR flight contravenes this subregulation if, during the flight on a track, the aircraft is flown at a cruising level that is not a specified IFR cruising level for the track.

(2) Subregulation (1) does not apply if:
(a) the aircraft is in uncontrolled airspace; and
(b) it is not practicable for the pilot in command to fly the aircraft at a specified IFR cruising level for the track.

(3) Subregulation (1) does not apply if air traffic control has:
  (a) given the pilot in command an air traffic control instruction to fly the aircraft at the cruising level; or
  (b) given the pilot in command an air traffic control clearance to fly the aircraft at the cruising level.

(4) A person commits an offence of strict liability if the person contravenes subregulation (1).

Penalty: 50 penalty units.

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

91.295 IFR flights at non-specified cruising levels—notifying Air Traffic Services

(1) The pilot in command of an aircraft for an IFR flight contravenes this subregulation if, during the flight on a track:
  (a) the aircraft is flown at a cruising level that is not a specified IFR cruising level for the track; and
  (b) before the aircraft is flown at that cruising level, the pilot in command does not notify Air Traffic Services of the cruising level.

(2) A person commits an offence of strict liability if the person contravenes subregulation (1).

Penalty: 50 penalty units.

91.300 IFR flights at non-specified cruising levels—avoiding collisions with aircraft conducting VFR flights

(1) The pilot in command of an aircraft for an IFR flight contravenes this subregulation if, during the flight on a track:
  (a) the aircraft is flown at a cruising level that is not a specified IFR cruising level for the track; and
  (b) there is a risk of collision between the aircraft and another aircraft that:
    (i) is conducting a VFR flight on a track; and
    (ii) is flying at a specified VFR cruising level for the track; and
  (c) the pilot in command does not give way to the other aircraft.

(2) A person commits an offence of strict liability if the person contravenes subregulation (1).

Penalty: 50 penalty units.

91.305 Minimum heights—IFR flights

(1) The pilot in command of an aircraft for an IFR flight contravenes this subregulation if, during the flight:

(a) the aircraft is flown along a route or route segment at a height lower than the minimum height mentioned in subregulation (2); and
(b) none of the circumstances mentioned in subregulation (3) applies.

Note: This regulation does not apply to certain medical transport operations in a rotorcraft and certain aerial work operations: see regulations 133.167 and 138.275.

(2) The minimum height is the lowest of the following for the route or route segment:
(a) the published lowest safe altitude for the route or route segment (if any);
(b) the minimum sector altitude published in the authorised aeronautical information for the flight (if any);
(c) the lowest safe altitude for the route or route segment.

(3) The circumstances are the following:
(a) the aircraft is taking off or landing;
(b) the aircraft is being flown in accordance with:
(i) requirements relating to visual approach or departure procedures published in the authorised aeronautical information for the flight; or
(ii) an authorised instrument departure procedure or an authorised instrument approach procedure; or
(iii) an air traffic control clearance;
(c) the aircraft is being flown in VMC by day.

(4) A person commits an offence of strict liability if the person contravenes subregulation (1).

Penalty: 50 penalty units.

91.307 IFR take-off and landing minima

(1) The Part 91 Manual of Standards may prescribe the following:
(a) requirements (the ***take-off minima requirements***) relating to take-off minima for an aerodrome;
(b) requirements (the ***landing minima requirements***) relating to landing minima for an aerodrome.

(2) The operator and the pilot in command of an aircraft for an IFR flight each contravene this subregulation if:
(a) the aircraft conducts a take-off at an aerodrome; and
(b) a take-off minima requirement for the aerodrome is not met for the flight.

(3) The operator and the pilot in command of an aircraft for an IFR flight each contravene this subregulation if:
(a) the aircraft conducts a landing at an aerodrome; and
(b) a landing minima requirement for the aerodrome is not met for the flight.

(4) A person commits an offence of strict liability if the person contravenes subregulation (2) or (3).

Penalty: 50 penalty units.

91.310 Approach ban for IFR flights

(1) The Part 91 Manual of Standards may prescribe circumstances in which an aircraft flown under the IFR must not make an approach to land at an aerodrome.

(2) The operator and the pilot in command of an aircraft for an IFR flight each contravene this subregulation if:
  (a) the aircraft makes an approach to land at an aerodrome; and
  (b) the approach to land is made in circumstances mentioned in subregulation (1).

(3) A person commits an offence of strict liability if the person contravenes subregulation (2).

Penalty: 50 penalty units.

91.315 Taking off and landing in low visibility

(1) The operator and the pilot in command of an aircraft for a flight each contravene this subregulation if:
  (a) the aircraft conducts a low-visibility operation at an aerodrome; and
  (b) when the operation begins:
    (i) if the operator is required under these Regulations to have an exposition or an operations manual—the operator does not hold an approval under regulation 91.045 to conduct the low-visibility operation; or
    (ii) if subparagraph (i) does not apply—the pilot in command does not hold an approval under regulation 91.045 to conduct the low-visibility operation.

(2) A person commits an offence of strict liability if the person contravenes subregulation (1).

Penalty: 50 penalty units.

91.320 Specified aircraft performance categories

(1) The operator of an aircraft contravenes this subregulation if, while the aircraft is operating at an aerodrome:
  (a) the aircraft does not operate in the specified aircraft performance category for the aircraft at the aerodrome; and
  (b) the operator:
    (i) does not hold an approval under regulation 91.045 for the aircraft to operate in a lower aircraft performance category for the aircraft at the aerodrome; or

(ii) holds an approval under regulation 91.045 for the aircraft to operate in a lower aircraft performance category for the aircraft at the aerodrome but does not comply with subregulation (3) of this regulation.

(2) The operator of an aircraft contravenes this subregulation if:
(a) the operator holds an approval under regulation 91.045 for the aircraft to operate in a lower aircraft performance category for the aircraft at the aerodrome; and
(b) the aircraft does not operate in that lower aircraft performance category.

(3) The operator must give details to the flight crew of:
(a) the approval; and
(b) the conditions (if any) imposed by CASA on the approval.

(4) A person commits an offence of strict liability if the person contravenes subregulation (1) or (2).

Penalty: 50 penalty units.

Subdivision 91.D.4.4—Avoiding collisions in the air

91.325 Basic rule

A flight crew member must, during a flight, maintain vigilance, so far as weather conditions permit, to see and avoid other aircraft.

91.330 Right of way rules

(1) The pilot in command of an aircraft contravenes this subregulation if, during a flight:
(a) there is a risk of collision between the aircraft and another aircraft; and
(b) a circumstance mentioned in column 1 of an item in the following table exists; and
(c) the pilot in command contravenes the right of way rule mentioned in column 2 of that item.

Right of way rules

Item	Column 1	Column 2
	Circumstance	**Right of way rule**
1	An aircraft is in an emergency and compelled to land	Any other aircraft must give way to the aircraft that is compelled to land
2	An aircraft is landing	Any other aircraft (whether in flight or operating on the ground or water) must give way to the aircraft that is landing
3	Two heavier-than-air aircraft are conducting an approach to land at an aerodrome	The following rules apply: (a) the higher aircraft must give way to the lower aircraft; (b) however, if the higher aircraft is in the final stages of an

Right of way rules		
Item	**Column 1**	**Column 2**
	Circumstance	**Right of way rule**
		approach to land, the lower aircraft must not take advantage of the higher aircraft's need to comply with paragraph (a) to cut in front of the higher aircraft; (c) despite paragraphs (a) and (b), a power-driven heavier-than-air aircraft must give way to an unpowered glider
4	An aircraft is overtaking another aircraft	The aircraft that is overtaking must give way to the aircraft being overtaken
5	Aircraft mentioned in column 2 are in the same vicinity	An aircraft mentioned in the following list must give way to an aircraft listed above it in the list: (a) a balloon; (b) a person descending by parachute; (c) an unpowered glider; (d) an airship; (e) an aircraft that is towing something (including another aircraft); (f) a power-driven aircraft
6	Two aircraft are on converging headings at approximately the same altitude	The aircraft that has the other aircraft on its right must give way to the other aircraft

(2) Subregulation (1) does not apply if it is necessary, in order to avoid a collision with an aircraft, not to comply with the right of way rule.

(3) A person commits an offence of strict liability if the person contravenes subregulation (1).

Penalty: 50 penalty units.

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

91.335 Additional right of way rules

Aircraft with right of way to maintain heading and speed

(1) The pilot in command of an aircraft for a flight contravenes this subregulation if, during the flight:
(a) there is a risk of collision with another aircraft; and
(b) the aircraft has right of way over the other aircraft (in accordance with regulation 91.330); and
(c) the aircraft's heading and speed is not maintained until there is no longer a risk of collision.

(2) The requirements are the following:

(a) the aircraft and any tow vehicle must give way, in accordance with subregulation (3), to an aircraft that is landing or on its final approach to land;

(b) the aircraft and any tow vehicle must give way, in accordance with subregulation (3), to an aircraft that is taking off or preparing for take-off;

(c) the aircraft and any tow vehicle must keep well clear of an aircraft it is overtaking;

(d) the aircraft and any tow vehicle must give way to an aircraft on the right if both aircraft are on a converging course;

(e) the aircraft and any tow vehicle must stop, or alter course to the right, so as to remain clear of an aircraft approaching head on or approximately so.

(3) For the purposes of paragraph (2)(a) or (2)(b):

(a) for a runway that has a marked runway hold position for the aircraft—the aircraft giving way and any tow vehicle must hold at that position; and

(b) for a runway that does not have a marked runway hold position—the aircraft giving way and any tow vehicle must not encroach upon a graded runway strip.

(4) Subregulation (1) does not apply if it is necessary, to avoid a collision with an aircraft and any tow vehicle, to not comply with the requirement.

(5) Subregulation (1) does not apply if the aircraft and any tow vehicle are being operated in accordance with an air traffic control clearance or air traffic control instructions.

(6) A person commits an offence of strict liability if the person contravenes subregulation (1).

Penalty: 50 penalty units.

Note: A defendant bears an evidential burden in relation to the matters in subregulation (4) or (5): see subsection 13.3(3) of the *Criminal Code*.

91.370 Take-off or landing at non-controlled aerodrome—all aircraft

(1) This regulation applies to an aircraft (the ***subject aircraft***) at a non-controlled aerodrome at which a take-off or landing of the aircraft can only occur from or to a runway.

Rules for take-off

(2) The pilot in command of the subject aircraft (other than a glider being towed by a glider tug) for a flight contravenes this subregulation if:

(a) the subject aircraft commences to take-off from a runway; and

(b) before taking off, a requirement mentioned in subregulation (3) is not met.

(3) The requirements are the following:

(a) if another aircraft is taking off before the subject aircraft from the same runway:
  (i) the other aircraft must have crossed the upwind end of the runway; or
  (ii) the other aircraft must have commenced a turn; or
  (iii) the runway must be longer than 1,800 m and the other aircraft must have become airborne and be at least 1,800 m beyond the proposed point of lift-off of the subject aircraft; or
  (iv) the other aircraft and the subject aircraft must both have a maximum take-off weight below 2,000 kg, and the other aircraft must be airborne and at least 600 m beyond the proposed point of lift-off of the subject aircraft;
(b) if another aircraft is landing on the same runway before the subject aircraft—the other aircraft must have vacated the runway;
(c) if another aircraft is landing before the subject aircraft and is using a crossing runway—the other aircraft must have crossed, or must have stopped short of, the runway the subject aircraft is taking off from.

Rules for landing

(4) The pilot in command of the subject aircraft (other than a glider) for a flight contravenes this subregulation if:
(a) the subject aircraft continues an approach to land at an aerodrome beyond the threshold of the runway; and
(b) before landing, a requirement mentioned in subregulation (5) is not met.

Note: Regulation 91.055 prohibits an aircraft (including a glider) being operated in a manner that creates a hazard to another aircraft, a person or property.

(5) The requirements are the following:
(a) if another aircraft is taking off using the same runway before the subject aircraft:
  (i) the other aircraft must be airborne and must have commenced a turn; or
  (ii) the other aircraft must be beyond the point on the runway at which the subject aircraft could be expected to complete its landing roll, and there must be sufficient distance for the subject aircraft to manoeuvre safely in the event of a missed approach;
(b) if another aircraft is landing on the same runway before the subject aircraft—the other aircraft must have vacated the runway or must be taxiing away from the runway;
(c) if another aircraft is landing before the subject aircraft and is using a crossing runway—the other aircraft must have crossed, or must have stopped short of, the runway the subject aircraft is landing on.

Application of rules where gliders or glider tugs operate

(6) At an aerodrome where gliders or glider tugs operate to a common circuit pattern from a parallel strip outside the runway strip:

(a) subregulations (2) and (4) apply to an aircraft taking off or landing, respectively, on either the runway or the parallel strip as if the runway and the strip were a single runway; but
(b) aircraft taxiing or stationary on either the runway or the parallel strip are taken not to affect operations on the other.

Exception

(7) Subregulation (2) or (4) does not apply if:
(a) the aircraft is taking off or landing at an aerodrome where gliders or glider tugs operate to a contra-circuit pattern on both a runway and a parallel strip outside the runway strip; and
(b) simultaneous operations on the runway and the parallel strip are permitted.

Offence

(8) A person commits an offence of strict liability if the person contravenes subregulation (2) or (4).

Penalty: 50 penalty units.

Note: A defendant bears an evidential burden in relation to the matters in subregulation (7): see subsection 13.3(3) of the *Criminal Code*.

91.375 Operating on manoeuvring area, or in the vicinity, of non-controlled aerodrome—general requirements

(1) The pilot in command of an aircraft for a flight contravenes this subregulation if:
(a) the aircraft is operated on the manoeuvring area of, or in the vicinity of, a non-controlled aerodrome; and
(b) a requirement mentioned in subregulation (2) is not met.

(2) The requirements are the following:
(a) the pilot must keep a lookout for other aircraft that are being operated on the manoeuvring area, or in the vicinity, of the aerodrome to avoid a collision;
(b) the pilot must ensure that the aircraft does not cause a danger to other aircraft on the manoeuvring area, or in the vicinity, of the aerodrome;
(c) if the pilot is flying the aircraft in the vicinity of the aerodrome—the pilot must join, or avoid, the circuit pattern for the aerodrome;
(d) if the aircraft is an aeroplane—the pilot must not:
(i) take-off from a part of the aerodrome that is outside the aerodrome landing area; or
(ii) land the aircraft on a part of the aerodrome that is outside the aerodrome landing area.

(3) A person commits an offence of strict liability if the person contravenes subregulation (1).

Penalty: 50 penalty units.

91.380 Operating on manoeuvring area, or in the vicinity, of non-controlled aerodrome—landing and taking off into the wind

(1) The pilot in command of an aircraft for a flight contravenes this subregulation if:
  (a) the aircraft is operated on the manoeuvring area of, or in the vicinity of, a non-controlled aerodrome; and
  (b) the pilot does not, to the extent practicable, land and take off into the wind.

(2) Subregulation (1) does not apply if:
  (a) the aircraft flight manual instructions for the aircraft allow the aircraft to land or take off downwind or crosswind; and
  (b) the pilot is satisfied that traffic conditions at the aerodrome enable such a landing or take-off to be carried out safely.

(3) A person commits an offence if the person contravenes subregulation (1).

Penalty: 50 penalty units.

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

91.385 Operating on manoeuvring area, or in the vicinity, of non-controlled aerodrome—requirements that apply after joining the circuit pattern

(1) The pilot in command of an aircraft (other than a rotorcraft) for a flight contravenes this subregulation if:
  (a) the aircraft is operated on the manoeuvring area of, or in the vicinity of, a non-controlled aerodrome; and
  (b) after joining the circuit pattern for a landing or while flying in the circuit pattern after take-off, the pilot does not:
    (i) comply with instructions in the authorised aeronautical information for the flight to the effect that all turns be made in a particular direction; or
    (ii) if there are no relevant instructions in the authorised aeronautical information for the flight—make all turns to the left.

(2) Subregulation (1) does not apply to the pilot in command of an aircraft if:
  (a) the aircraft is a seaplane or amphibian and the pilot in command contravenes the subregulation only to the extent necessary:
    (i) to avoid an obstacle; or
    (ii) to avoid undue noise over a populous area without compromising the aircraft's safety; or
    (iii) for a single-engine seaplane or amphibian—to enable the aircraft to land on water if its engine fails; or
  (b) the aircraft is a glider (other than a glider with an engine operating) and the pilot in command contravenes the subregulation only to the extent necessary to enable the aircraft to land safely.

(3) A person commits an offence of strict liability if the person contravenes subregulation (1).

Penalty: 50 penalty units.

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

91.390 Operating on manoeuvring area, or in the vicinity, of non-controlled aerodrome—requirements related to maintaining the same track after take-off

(1) The pilot in command of an aircraft (other than a rotorcraft, a glider or a powered parachute) for a flight contravenes this subregulation if:
  (a) the aircraft is operated on the manoeuvring area of, or in the vicinity of, a non-controlled aerodrome; and
  (b) the pilot does not, after take-off, maintain the same track from the take-off until the aircraft is 500 ft AGL.

(2) Subregulation (1) does not apply to the pilot in command of a seaplane or amphibian if the pilot in command contravenes the subregulation only to the extent necessary:
  (a) to avoid an obstacle; or
  (b) to avoid undue noise over a populated area without compromising the aircraft's safety; or
  (c) for a single engine seaplane or amphibian—to enable the aircraft to land on water if its engine fails.

(3) Subregulation (1) does not apply to the pilot in command of an aircraft if a change to the track is necessary to avoid the terrain.

(4) A person commits an offence of strict liability if the person contravenes subregulation (1).

Penalty: 50 penalty units.

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

91.395 Straight-in approaches at non-controlled aerodromes

(1) The pilot in command of an aircraft for a flight contravenes this subregulation if:
  (a) the aircraft approaches a non-controlled aerodrome to land using a straight-in approach; and
  (b) a requirement mentioned in subregulation (2) is not met.

(2) The requirements are the following:
  (a) before starting the approach, the pilot in command must determine:
    (i) the wind direction at the aerodrome; and
    (ii) the runways in use at the aerodrome;

(b) the aircraft must give way to any other aircraft flying in the circuit pattern for the aerodrome;

(c) for an approach other than an approach covered by subregulation (2A)—all manoeuvring must be carried out, to establish the aircraft on the final approach, at least 3 nautical miles from the threshold of the runway intended to be used for the landing.

(2A) An approach is covered by this subregulation if:

(a) the approach is carried out in IMC using an instrument approach procedure; or

(b) the approach is by a Part 103 aircraft prescribed by the Part 103 Manual of Standards for the purposes of this paragraph.

(3) A person commits an offence of strict liability if the person contravenes subregulation (1).

Penalty: 50 penalty units.

91.400 Communicating at certified, registered, military or designated non-controlled aerodromes

(1) The pilot in command of an aircraft for a flight contravenes this subregulation if:

(a) the aircraft is operated on the manoeuvring area of, or in the vicinity of:

(i) a certified aerodrome; or

(ii) a registered aerodrome; or

(iii) a military aerodrome; or

(iv) an aerodrome prescribed as a designated non-controlled aerodrome by the Part 91 Manual of Standards for this subparagraph; and

(b) the aerodrome is a non-controlled aerodrome; and

(c) if the aircraft is not carrying an operative radio—the requirement in subregulation (2) is not met.

(2) The requirement is that either subregulation (3) or (4) is satisfied.

(3) This subregulation is satisfied if:

(a) the flight is conducted during the day in VMC; and

(b) the flight is conducted in company with another aircraft; and

(c) the other aircraft is carrying an operative radio; and

(d) the pilot in command of the other aircraft is:

(i) if the aircraft is an Australian aircraft—authorised to operate the radio under Part 61; or

(ii) if the aircraft is a foreign registered aircraft—authorised to operate the radio under the law of the aircraft's State of registry or the State of the operator; or

(iii) if the aircraft is a Part 103 aircraft—authorised to operate the radio by a Part 103 ASAO.

(4) This subregulation is satisfied if:

(a) either:
(i) the radio becomes inoperative during the flight; or
(ii) the purpose of the flight is to take the radio to a place where it can be repaired; and
(b) if the aircraft is flying in the vicinity of the aerodrome—each of the following is switched on:
(i) the aircraft's landing lights (if any);
(ii) the aircraft's anti-collision lights (if any);
(iii) the aircraft's secondary surveillance radar transponder (if any); and
(c) if the aircraft is arriving at the aerodrome—the aircraft joins the circuit pattern for the aerodrome on the cross-wind or down-wind leg of the circuit pattern.

(5) A person commits an offence of strict liability if the person contravenes subregulation (1).

Penalty: 50 penalty units.

91.405 Aircraft in aerodrome traffic at controlled aerodromes

(1) The pilot in command of an aircraft for a flight contravenes this subregulation if:
(a) the aircraft is part of aerodrome traffic at a controlled aerodrome; and
(b) a requirement mentioned in subregulation (2) is not met.

(2) The requirements are the following:
(a) a continuous watch for instructions given visually by Air Traffic Services for the aerodrome using standard visual signals must be maintained;
(b) if a continuous listening watch on the frequency specified in the authorised aeronautical information for the flight for communications with Air Traffic Services for the aerodrome can be maintained—the continuous listening watch must be maintained;
(c) authorisation to conduct a manoeuvre preparatory to, or associated with, taxiing, landing or take-off must be obtained from Air Traffic Services for the aerodrome before the manoeuvre is conducted.

(3) The pilot in command of an aircraft (other than a Part 131 aircraft) for a flight contravenes this subregulation if:
(a) the aircraft is part of aerodrome traffic at a controlled aerodrome; and
(b) a requirement mentioned in subregulation (4) is not met.

(4) The requirements are the following:
(a) if the aircraft takes off from the aerodrome and a change to the aircraft's track is not necessary to avoid the terrain—the aircraft must maintain the same track from the take-off until the aircraft is 500 ft AGL;
(b) if the aircraft joins the circuit pattern for the aerodrome for a landing—the aircraft must, after joining the circuit pattern, make all turns in the direction of the circuit pattern;

(c) if the aircraft takes off from the aerodrome—the aircraft must, after taking off, make all turns in the direction of the circuit pattern while the pilot is flying in the circuit pattern for the aerodrome.

(5) Subregulation (3) does not apply if:

(a) Air Traffic Services for the aerodrome instructed or permitted the pilot to engage in the conduct that would otherwise result in the contravention of that subregulation; or

(b) the aircraft is being flown in accordance with an authorised instrument departure procedure or an authorised instrument approach procedure.

(6) A person commits an offence of strict liability if the person contravenes subregulation (1) or (3).

Penalty: 50 penalty units.

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

Division 91.D.5—Taking off, landing and ground operations

91.410 Use of aerodromes

(1) The operator and the pilot in command of an aircraft for a flight each contravene this subregulation if:
  (a) the aircraft takes off from, or lands at, a place; and
  (b) the place does not meet the requirement in subregulation (2).

Note: This regulation does not apply to the operation of an aircraft if regulation 121.205 applies to the operation: see regulation 91.035.

(2) The requirement is that:
  (a) the place is one of the following:
    (i) a certified aerodrome;
    (ii) a registered aerodrome;
    (iii) an aerodrome for which an arrangement under section 20 of the Act is in force;
    (iv) a place that is suitable for the landing and taking-off of aircraft; and
  (b) the aircraft can land at, or take off from, the place safely having regard to all the circumstances of the proposed landing or take-off (including the prevailing weather conditions).

(3) For the purposes of the definition of ***aerodrome*** in the Act, a place mentioned in subparagraph (2)(a)(iv) is authorised to be used as an aerodrome.

(4) A person commits an offence of strict liability if the person contravenes subregulation (1).

Penalty: 50 penalty units.

91.415 Taxiing aircraft

(1) A person contravenes this subregulation if:
  (a) the person taxis an aircraft; and
  (b) any of the following apply:
    (i) for an aeroplane that is an Australian aircraft other than a Part 103 aircraft—the person is not authorised under Part 61 or 64 to taxi the aeroplane;
    (ii) for a rotorcraft that is an Australian aircraft other than a Part 103 aircraft—the person is not authorised under Part 61 to taxi the rotorcraft;
    (iii) for an aeroplane that is a foreign registered aircraft—the person is not qualified to taxi the aeroplane under the law of the aeroplane's State of registry or the State of the operator, nor authorised under Part 64;
    (iv) for a rotorcraft that is a foreign registered aircraft—the person is not qualified to pilot the rotorcraft under the law of the rotorcraft's State of registry or the State of the operator;

(v) for a Part 103 aircraft—the person is not authorised by a Part 103 ASAO to taxi the aircraft.

(2) A person commits an offence of strict liability if the person contravenes subregulation (1).

Penalty: 50 penalty units.

91.420 Parked aircraft not to create hazard

(1) A person contravenes this subregulation if the person parks an aircraft in a place where the aircraft is a hazard to the movement of other aircraft.

(2) A person commits an offence of strict liability if the person contravenes subregulation (1).

Penalty: 25 penalty units.

91.425 Safety when aeroplane operating on ground

(1) A person contravenes this subregulation if:
(a) the person starts the engine of an aeroplane, or causes the engine to be started, while the aeroplane is on the ground; and
(b) a requirement mentioned in subregulation (2) is not met.

(2) The requirements are the following:
(a) the person who starts the engine or causes the engine to be started must be:
(i) if the aeroplane is an Australian aircraft—a person authorised to pilot the aeroplane under Part 61 or a person authorised to taxi the aeroplane under Part 64; or
(ii) if the aeroplane is a foreign registered aircraft—a person qualified to pilot or taxi the aeroplane under the law of the aeroplane's State of registry or the State of the operator; or
(iii) a person of a kind prescribed by the Part 91 Manual of Standards; and
(b) if subparagraph (a)(iii) applies—the aeroplane must be secured from moving.

(3) Subregulation (1) does not apply if:
(a) the person starting the engine of the aeroplane is hand-starting the propeller of the aeroplane; and
(b) assistance is not readily available; and
(c) adequate provision is made to prevent the aeroplane moving forward; and
(d) no person is on board the aircraft.

(4) A person contravenes this subregulation if:
(a) the person operates an aeroplane on the ground, or causes an aeroplane to be operated on the ground; and

(b) the person permits another person to board the aeroplane or to remain on the aeroplane while a pilot seat of the aeroplane is not occupied by a person who is competent to apply the brakes and control the engine.

(5) For the purposes of paragraph (4)(b), a person is ***competent to apply the brakes and control the engine*** of an aeroplane if:

(a) the person has been given instructions on how, and assessed as competent, to apply the brakes and control the engine (including how to shut the engine down) by another person; or

(b) the person is authorised under Part 61 or Part 64 to taxi the aeroplane; or

(c) if the aeroplane is a foreign registered aircraft—the person is qualified to pilot or taxi the aeroplane under the law of the aeroplane's State of registry or the State of the operator.

(6) A person commits an offence of strict liability if the person contravenes subregulation (1) or (4).

Penalty: 50 penalty units.

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

91.430 Safety when rotorcraft operating on ground

(1) A person contravenes this subregulation if:

(a) the person operates a rotorcraft on the ground; and

(b) the rotorcraft is being operated other than for maintenance or maintenance training; and

(c) a requirement mentioned in subregulation (2) is not met.

(2) The requirements are the following:

(a) that the person is:

(i) if the rotorcraft is an Australian aircraft—authorised under Part 61 to pilot the rotorcraft; or

(ii) if the rotorcraft is a foreign registered aircraft—authorised to pilot the rotorcraft by the rotorcraft's State of registry; or

(iii) a person of a kind prescribed by the Part 91 Manual of Standards; and

(b) if subparagraph (a)(iii) applies—the rotorcraft must be secured from moving.

(3) A person commits an offence of strict liability if the person contravenes subregulation (1).

Penalty: 50 penalty units.

Division 91.D.6—Fuel requirements

91.455 Fuel requirements

(1) The Part 91 Manual of Standards may prescribe requirements relating to fuel for aircraft, including (but not limited to) the following:
  (a) matters that must be considered when determining whether an aircraft has sufficient fuel to complete a flight safely;
  (b) the amounts of fuel that must be carried on board an aircraft for a flight;
  (c) procedures for monitoring amounts of fuel during a flight;
  (d) procedures to be followed if fuel reaches specified amounts during a flight.

(2) The pilot in command of an aircraft for a flight contravenes this subregulation if a requirement mentioned in subregulation (1) is not met for the flight.

Note: This regulation does not apply to the operation of an aircraft if Division 121.D.6, 133.D.6 or 135.D.6 applies to the operation: see regulation 91.035.

(3) A person commits an offence of strict liability if the person contravenes subregulation (2).

Penalty: 50 penalty units.

91.460 Oil requirements

(1) The pilot in command of an aircraft for a flight contravenes this subregulation if, when the flight begins, the aircraft is not carrying sufficient oil to complete the flight safely.

(2) A person commits an offence of strict liability if the person contravenes subregulation (1).

Penalty: 50 penalty units.

91.465 Contaminated, degraded or inappropriate fuels

(1) The operator and pilot in command of an aircraft for a flight each contravene this subregulation if, before the flight begins, the operator or pilot in command does not ensure that the aircraft has been fuelled with fuel that is not contaminated, degraded or inappropriate.

(2) A person contravenes this subregulation if:
  (a) the person supplies fuel for fuelling an aircraft (other than a Part 131 aircraft); and
  (b) the fuel is contaminated, degraded or inappropriate fuel for the aircraft.

(3) A person contravenes this subregulation if:
  (a) the person fuels an aircraft; and
  (b) the fuel is contaminated, degraded or inappropriate fuel for the aircraft.

(4) A person commits an offence if the person contravenes subregulation (1), (2) or (3).

Penalty: 50 penalty units.

91.470 Fire hazards

(1) A person contravenes this subregulation if:
(a) an aircraft is being fuelled; and
(b) the person creates a fire hazard within 15 m of the aircraft or the equipment used to fuel the aircraft.

(2) A person contravenes this subregulation if:
(a) a fire hazard exists within 15 m of an aircraft or the aircraft's fuelling equipment; and
(b) the person fuels the aircraft.

(3) A person commits an offence of strict liability if the person contravenes subregulation (1) or (2).

Penalty: 50 penalty units.

91.475 Fuelling aircraft—fire fighting equipment

(1) A person who fuels an aircraft contravenes this subregulation if a requirement mentioned in subregulation (2) is not met.

(2) The requirements are the following:
(a) at all times during the fuelling, at least the number of fire extinguishers mentioned in subregulation (2A):
(i) must be on the fuelling equipment or positioned at a distance of not less than 6 m and not more than 15 m from the fuelling point; and
(ii) must be readily available for use by the person;
(b) each fire extinguisher:
(i) must be of a type and capacity suitable for extinguishing fuel and electrical fires; and
(ii) for a fuelling operation in Australian territory—must comply with Australian/New Zealand Standard AS/NZS 1841, as in force from time to time.

(2A) For the purposes of paragraph (2)(a) the number of fire extinguishers is:
(a) for an aircraft other than a Part 131 aircraft—2; and
(b) for a Part 131 aircraft—one.

(3) A person commits an offence of strict liability if the person contravenes subregulation (1).

Penalty: 50 penalty units.

91.480 Fuelling aircraft—electrical bonding

(1) A person contravenes this subregulation if:
  (a) the person is fuelling an aircraft; and
  (b) the aircraft and the equipment used to fuel the aircraft are not electrically bonded.

(2) A person commits an offence of strict liability if the person contravenes subregulation (1).

  Penalty: 50 penalty units.

91.485 Equipment or electronic devices operating near aircraft

Operation of equipment or electronic device near aircraft during fuelling

(1) A person contravenes this subregulation if:
  (a) an aircraft is being fuelled; and
  (b) the person operates equipment or an electronic device within 15 m of a critical fuelling point for the aircraft.

Fuelling aircraft while equipment or electronic device is operated near aircraft

(2) A person contravenes this subregulation if:
  (a) equipment or an electronic device is being operated within 15 m of a critical fuelling point for the fuelling of an aircraft; and
  (b) the person fuels the aircraft.

Exceptions

(3) Subregulations (1) and (2) do not apply if:
  (a) the equipment or electronic device being operated:
    (i) is part of the aircraft or the aircraft's fuelling equipment; or
    (ii) is designed for use during fuelling operations; or
    (iii) performs an aircraft servicing function and is safe for use within 15 m of a critical fuelling point for the fuelling of the aircraft; or
    (iv) complies with an industry standard about the safe use of equipment or electronic devices within 15 m of a critical fuelling point for the fuelling of the aircraft; or
  (b) the equipment being operated is an auxiliary power unit of the aircraft and the following requirements are met:
    (i) the operation of the auxiliary power unit starts before the person begins fuelling the aircraft;
    (ii) the aircraft flight manual instructions for the aircraft permit the auxiliary power unit to be operated during fuelling; or
  (c) the electronic device being operated:

(i) is hazardous to the process of fuelling the aircraft only because it is designed to produce radio emissions (within the meaning of the *Radiocommunications Act 1992*); and

(ii) is operated at least 6 m from each critical fuelling point for the fuelling of the aircraft; or

(d) for a turbine-engine aircraft—the electronic device being operated is a low-risk electronic device and is operated in accordance with regulation 91.490.

Offence

(4) A person commits an offence of strict liability if the person contravenes subregulation (1) or (2).

Penalty: 50 penalty units.

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

91.490 Fuelling turbine-engine aircraft—low-risk electronic devices

Use of device inside cabin of aircraft

(1) A person on a turbine-engine aircraft for a flight contravenes this subregulation if:

(a) the person operates a low-risk electronic device inside the cabin of the aircraft while the aircraft is being fuelled; and

(b) the pilot in command of the aircraft has not given the person permission to operate the device while the aircraft is being fuelled.

(2) The pilot in command of a turbine-engine aircraft for a flight contravenes this subregulation if:

(a) the pilot in command gives permission to a person to operate a low-risk electronic device inside the cabin of the aircraft while the aircraft is being fuelled; and

(b) the requirement mentioned in subregulation (3) is not met.

(3) The requirement is that, during fuelling, each cabin door within 3 m of a critical fuelling point for the fuelling of the aircraft must be closed.

Use of device outside cabin of aircraft

(4) A person contravenes this subregulation if:

(a) the person operates a low-risk electronic device outside the cabin of a turbine-engine aircraft while the aircraft is being fuelled; and

(b) a requirement mentioned in subregulation (5) is not met.

(5) The requirements are the following:

(a) the device must be operated at a distance of greater than 3 m from each critical fuelling point for the fuelling of the aircraft;

(b) the device may also be operated at a distance of 3 m or less from a critical fuelling point for the fuelling of the aircraft if the person operating the device:

(i) is employed or engaged by the operator of the aircraft; and

(ii) has successfully completed training and has been assessed by the operator as competent to comply with the requirements of this Division in relation to operating the device in those areas and to avoid the risks associated with being distracted when operating the device.

(6) A person commits an offence if the person contravenes subregulation (1), (2) or (4).

Penalty: 50 penalty units.

91.495 Only turbine-engine aircraft to be hot fuelled

(1) The pilot in command of an aircraft for a flight contravenes this subregulation if:

(a) the aircraft is hot fuelled for the flight; and

(b) the aircraft is not a turbine-engine aircraft.

Note: This regulation does not apply to the operation of an aircraft if regulation 138.300 applies to the operation: see regulation 91.035.

(2) A person commits an offence of strict liability if the person contravenes subregulation (1).

Penalty: 50 penalty units.

91.500 Hot fuelling aircraft—general

(1) The pilot in command of an aircraft for a flight contravenes this subregulation if:

(a) the aircraft is hot fuelled for the flight; and

(b) a requirement mentioned in subregulation (2) is not met.

Note: This regulation does not apply to the operation of an aircraft if regulation 138.300 applies to the operation: see regulation 91.035.

(2) The requirements are that, at the time of the hot fuelling:

(a) it must be safe to hot fuel; and

(b) if the aircraft is a turbine-engine propeller-driven aeroplane:

(i) an aeroplane propeller must not be within 2.5 m of the fuelling point used for the hot fuelling; and

(ii) a person using the fuelling point must be separated from the propeller by a part of the aeroplane's structure (such as a wing) and must not be able to move directly into the propeller's arc from the fuelling point; and

(c) doors on the fuelling side of the aircraft must be closed; and

(d) at least one door on the non-fuelling side of the aircraft must be open; and

(e) a system of fuelling must not be used that allows fuel to be exposed to the atmosphere; and

(f) there must be a means available to the person fuelling the aircraft to quickly cut off the fuel supply at its point of entry into the aircraft's fuel tank; and

(g) the person in charge of the aircraft, or the person at the aircraft's controls, must maintain communication with the person fuelling the aircraft by means of:

(i) an electronic communication system; or

(ii) visual contact and an agreed system of signals.

(3) A person commits an offence of strict liability if the person contravenes subregulation (1).

Penalty: 50 penalty units.

91.505 Hot fuelling aircraft—procedures etc.

(1) The pilot in command of an aircraft for a flight contravenes this subregulation if:

(a) the aircraft is hot fuelled for the flight; and

(b) the following are not set out in the aircraft flight manual instructions for the aircraft:

(i) procedures for the hot fuelling of the aircraft;

(ii) the circumstances in which the aircraft can be hot fuelled;

(iii) the procedures to be followed if an emergency occurs during hot fuelling.

Note: This regulation does not apply to the operation of an aircraft if regulation 138.300 applies to the operation: see regulation 91.035.

(2) The pilot in command of an aircraft for a flight contravenes this subregulation if:

(a) a requirement of a procedure mentioned in subparagraph (1)(b)(i) or (iii) is not met in relation to the fuelling of the aircraft for the flight; or

(b) the aircraft is fuelled in a circumstance that is not mentioned in subparagraph (1)(b)(ii).

(3) The pilot in command of an aircraft for a flight contravenes this subregulation if:

(a) the aircraft is hot fuelled; and

(b) before the hot fuelling begins, a person who is directly involved with the hot fuelling has not been briefed about compliance with the procedures and circumstances mentioned in paragraph (1)(b).

(4) A person commits an offence of strict liability if the person contravenes subregulation (1), (2), or (3).

Penalty: 50 penalty units.

91.510 Fuelling aircraft—persons on aircraft, boarding or disembarking

(1) The pilot in command of an aircraft for a flight contravenes this subregulation if:

(a) the aircraft is being fuelled for the flight with a highly volatile fuel; and

(b) the fuelling begins or continues when a person who is not a crew member of the aircraft is:
(i) on the aircraft; or
(ii) boarding the aircraft; or
(iii) disembarking from the aircraft.

(2) The pilot in command of an aircraft for a flight contravenes this subregulation if:
(a) the aircraft is being fuelled with fuel other than a highly volatile fuel; and
(b) the fuelling begins or continues when a person who is not a crew member of the aircraft is:
(i) on the aircraft; or
(ii) boarding the aircraft; or
(iii) disembarking from the aircraft; and
(c) neither the operator of the aircraft nor the pilot in command holds an approval under regulation 91.045 to fuel the aircraft in those circumstances.

Note: This regulation does not apply to the operation of an aircraft if regulation 121.240, 133.195, 135.220 or 138.302 applies to the operation: see regulation 91.035.

(2A) Subregulation (1) or (2) does not apply in relation to the replacement of fuel cylinders on a Part 131 aircraft.

(3) A person commits an offence of strict liability if the person contravenes subregulation (1) or (2).

Penalty: 50 penalty units.

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

91.515 Fuelling aircraft if fuel vapour detected

(1) The operator and the pilot in command of an aircraft for a flight each contravene this subregulation if:
(a) the aircraft is being fuelled for the flight; and
(b) a person who is not a crew member of the aircraft is:
(i) on the aircraft; or
(ii) boarding the aircraft; or
(iii) disembarking from the aircraft; and
(c) fuel vapour is detected in the aircraft; and
(d) the aircraft continues to be fuelled.

(2) A person commits an offence of strict liability if the person contravenes subregulation (1).

Penalty: 50 penalty units.

Division 91.D.7—Safety of persons on aircraft and cargo requirements

91.520 Crew members to be fit for duty

(1) A crew member of an aircraft for a flight contravenes this subregulation if:
  (a) the crew member is, or is likely to be, unfit to perform a duty:
    (i) that is a required duty for the crew member to perform during the flight; and
    (ii) that is related to the safety of the aircraft or of the persons on the aircraft or cargo on the aircraft; and
  (b) the crew member begins to carry out the crew member's duties for the flight.

(2) A crew member of an aircraft for a flight contravenes this subregulation if:
  (a) the crew member carries out a duty for the flight; and
  (b) either:
    (i) the crew member consumes alcohol at any time during the period of 8 hours ending when the flight begins; or
    (ii) if a test of a body sample of the crew member to determine the level of alcohol in the sample was taken at the time of carrying out the duty—the test would reveal that the permitted level for alcohol (within the meaning of Part 99) is exceeded.

(3) A crew member of an aircraft for a flight contravenes this subregulation if the crew member consumes alcohol while on board the aircraft.

(4) The operator of an aircraft for a flight contravenes this subregulation if:
  (a) the operator believes on reasonable grounds that a crew member is unfit to perform a duty on the flight; and
  (b) the duty relates to the safety of the aircraft or of the persons on the aircraft or cargo on the aircraft; and
  (c) the operator assigns the crew member to duty for the flight.

(5) A person commits an offence of strict liability if the person contravenes subregulation (1), (2) or (3).

  Penalty: 50 penalty units.

(6) A person commits an offence if the person contravenes subregulation (4).

  Penalty: 50 penalty units.

(7) Strict liability applies to paragraphs (4)(b) and (c).

(8) Without limiting subregulation (1) or (4), a crew member is taken to be, or is taken to be likely to be, unfit to perform a duty if:

(a) the crew member is fatigued to the extent that the crew member's ability to safely perform the duty is reduced or likely to be reduced; or

(b) the crew member's ability to safely perform the duty is impaired, or likely to be impaired, because the crew member has consumed, used or absorbed a psychoactive substance.

91.525 Offensive or disorderly behaviour on aircraft

(1) A person on an aircraft for a flight contravenes this subregulation if:

(a) the person behaves in an offensive or disorderly manner; and

(b) as a result of that behaviour, the safety of the aircraft or persons on the aircraft is endangered.

(2) The operator or a crew member of an aircraft for a flight may refuse to allow a person to board the aircraft if there are reasonable grounds to believe that the person is likely to behave in an offensive or disorderly manner that is likely to endanger the safety of the aircraft or persons on the aircraft.

(3) Without limiting subregulation (1) or (2), a person is taken to behave in an offensive or disorderly manner if the person:

(a) assaults, intimidates or threatens another person (whether the assault, intimidation or threat is verbal or physical, and whether or not a weapon or object is used); or

(b) intentionally damages or destroys property.

(4) A person commits an offence of strict liability if the person contravenes subregulation (1).

Penalty: 50 penalty units.

91.530 When smoking not permitted

(1) A person on an aircraft (other than a Part 103 aircraft) for a flight contravenes this subregulation if the person smokes:

(a) during take-off or landing; or

(b) during a period when the pilot in command has directed the person not to smoke.

Note: Section 37 of the *Air Navigation Regulation 2016* prohibits smoking anywhere on an aircraft if the aircraft is engaged in certain operations.

(2) A person on an aircraft (other than a Part 103 aircraft) for a flight contravenes this subregulation if the person smokes in the aircraft's toilet.

(3) For the purposes of paragraph (1)(b), the pilot in command is taken to have directed a person on an aircraft not to smoke if:

(a) a permanent "no smoking" sign is displayed in the aircraft's cabin; or

(b) the pilot has switched on an illuminated "no smoking" sign in the aircraft's cabin.

(3A) A person on a Part 103 aircraft for a flight contravenes this subregulation if the person smokes on the aircraft.

(4) For the purposes of this regulation, smoking is taken to include the use of electronic cigarettes.

(5) A person commits an offence of strict liability if the person contravenes subregulation (1), (2) or (3A).

Penalty: 50 penalty units.

91.535 Crew safety during turbulence

(1) The pilot in command of an aircraft for a flight contravenes this subregulation if:
- (a) a crew member (other than a flight crew member) is carried on the flight; and
- (b) before the flight begins, the pilot in command has not implemented procedures for:
  - (i) the protection of such crew members during turbulence or during a period when turbulence is expected; or
  - (ii) the limiting or ceasing of crew member duties during turbulence or during a period when turbulence is expected.

(2) A person commits an offence of strict liability if the person contravenes subregulation (1).

Penalty: 50 penalty units.

91.540 Means of passenger communication

(1) The operator and pilot in command of an aircraft for a flight each contravene this subregulation if:
- (a) due to the design or configuration of the aircraft, the pilot in command is unable to see all seats (and berths) on the aircraft from the pilot in command's pilot seat; and
- (b) before the aircraft begins the flight, the aircraft is not fitted with a means to communicate with all passengers during all phases of the flight (including emergencies).

(2) A person commits an offence if the person contravenes subregulation (1).

Penalty: 50 penalty units.

91.545 Seating for persons on aircraft

(1) The operator and pilot in command of an aircraft for a flight each contravene this subregulation if:
- (a) a person is assigned a seat (or a berth) on the aircraft for the flight; and
- (b) the seat or berth is not fitted with a seatbelt or shoulder harness; and
- (c) the aircraft begins the flight.

(2) Subregulation (1) does not apply if circumstances prescribed by the Part 91 Manual of Standards apply in relation to the carriage of the person for the flight.

(3) A person commits an offence of strict liability if the person contravenes subregulation (1).

Penalty: 50 penalty units.

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

91.550 Seating for flight crew members

(1) The pilot in command of an aircraft for a flight contravenes this subregulation if, during the flight, a requirement mentioned in subregulation (2) is not met.

(2) The requirements are the following:

(a) the flight must be conducted by at least one pilot who:

(i) for an Australian aircraft—holds a pilot licence and is permitted under regulation 61.385 to conduct the flight; or

(ii) for a foreign aircraft—is qualified to pilot the aircraft under the law of the aircraft's State of registry or the State of the operator;

(b) at all times during the flight, such a pilot must occupy a pilot seat, with the seatbelt securely fastened;

(c) during take-off, landing or any other period that the pilot in command directs, each flight crew member required for the flight must occupy the flight crew member's crew station with the seatbelt and shoulder harness securely fastened;

(d) when occupying a crew station on the flight deck other than a flight crew member's crew station, the flight crew member must keep the flight crew member's seatbelt securely fastened.

(3) A person commits an offence of strict liability if the person contravenes subregulation (1).

Penalty: 50 penalty units.

91.555 Seating for crew members other than flight crew members

(1) A crew member (other than a flight crew member) for a flight of an aircraft contravenes this subregulation if, during take-off, landing or any other period that the pilot in command directs, the crew member is not:

(a) occupying the crew member's crew station; and

(b) wearing, securely fastened, the seatbelts and shoulder harnesses provided at that station.

Note: This regulation does not apply to the operation of an aircraft if regulation 138.375 applies to the operation: see regulation 91.035.

(2) Subregulation (1) does not apply if:

(a) a direction is given by the pilot in command during turbulence; and

(b) the crew member occupies a seat other than the crew member's crew station; and

(c) the crew member is wearing, securely fastened, the seatbelts and shoulder harnesses provided at that seat.

(3) A person commits an offence of strict liability if the person contravenes subregulation (1).

Penalty: 50 penalty units.

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

91.560 Restraint of infants and children

(1) A passenger on an aircraft for a flight contravenes this subregulation if, during the flight:

(a) a direction is given to passengers under regulation 91.570 to fasten seatbelts or shoulder harnesses (as the case requires); and

(b) the passenger is responsible for an infant or child carried on the flight; and

(c) the passenger does not ensure that the infant or child is restrained in accordance with the requirements prescribed by the Part 91 Manual of Standards for the purposes of this paragraph.

(2) A person commits an offence of strict liability if the person contravenes subregulation (1).

Penalty: 50 penalty units.

91.565 Passengers—safety briefings and instructions

(1) The pilot in command of an aircraft for a flight contravenes this subregulation if:

(a) a passenger is not given a safety briefing and instructions in accordance with the requirements prescribed by the Part 91 Manual of Standards for the purposes of this paragraph; and

(b) the aircraft takes off for the flight.

Note: This regulation does not apply to the operation of an aircraft if regulation 121.285, 133.240 or 135.280 applies to the operation: see regulation 91.035.

(2) Subregulation (1) does not apply if:

(a) the passenger has been previously carried on the aircraft; and

(b) the passenger has previously been given a safety briefing and instructions in accordance with this regulation; and

(c) in the circumstances it is not reasonably necessary to give the same safety briefing and instructions.

(3) A person commits an offence of strict liability if the person contravenes subregulation (1).

Penalty: 50 penalty units.

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

91.570 Passengers—safety directions by pilot in command

(1) The pilot in command of an aircraft for a flight contravenes this subregulation if, before doing a thing mentioned in subregulation (2), a passenger is not directed to do the following:

(a) to fasten the passenger's seatbelt or shoulder harness;

(b) if the seat back of the seat (or berth) in which the passenger is sitting is adjustable—to ensure that the seat back is in an upright position or other position permitted by the aircraft flight manual instructions for the aircraft while the aircraft is doing a thing mentioned in subregulation (2);

(c) if there are attachments to or for the seat (including a tray table or footrest)—to stow the attachments or to position them as permitted by the aircraft flight manual instructions for the aircraft while the aircraft is doing a thing mentioned in subregulation (2).

Note: This regulation does not apply to the operation of an aircraft if regulation 105.105 applies to the operation: see regulation 91.035.

(2) The things are the following:

(a) taxiing;

(b) taking off;

(c) landing.

(3) The pilot in command of an aircraft for a flight contravenes this subregulation if:

(a) the pilot in command has reason to believe it is necessary, for the safety of passengers, that a passenger's seatbelt or shoulder harness is fastened; and

(b) the pilot in command does not direct the passenger to fasten the passenger's seatbelt or shoulder harness.

(4) For subregulations (1) and (3), a direction that seatbelts or shoulder harnesses are to be fastened may be given by the operation of an illuminated sign.

(5) A direction mentioned in paragraph (1)(a) does not apply to a person occupying a seat (or berth) on an aircraft if:

(a) the person's health may suffer a detriment by being restrained by a seatbelt; and

(b) the pilot in command agrees that the person is otherwise safely restrained.

(6) A direction mentioned in paragraph (1)(b) does not apply to a person occupying a seat (or berth) on an aircraft if:

(a) the person is ill or incapacitated; and

(b) the pilot in command agrees to the passenger not adjusting their seat (or berth); and

(c) the person is otherwise safely restrained and will not affect the safety of other passengers.

(7) A person commits an offence of strict liability if the person contravenes subregulation (1) or (3).

Penalty: 50 penalty units.

Note: A defendant bears an evidential burden in relation to the matters in subregulations (5) and (6): see subsection 13.3(3) of the *Criminal Code*.

91.575 Passengers—compliance with safety directions

(1) A passenger on an aircraft for a flight contravenes this subregulation if, during the flight:
(a) a direction mentioned in regulation 91.570 is given to the passenger; and
(b) the person does not comply with the direction.

(2) A person commits an offence of strict liability if the person contravenes subregulation (1).

Penalty: 50 penalty units.

91.580 Passengers—compliance with safety instructions by cabin crew

(1) A cabin crew member of an aircraft may, during a flight, give an instruction to a passenger:
(a) relating to the safety of the aircraft; or
(b) relating to the safety of a person on the aircraft.

(2) A passenger on the aircraft contravenes this subregulation if:
(a) a cabin crew member gives a passenger an instruction under subregulation (1); and
(b) the passenger does not comply with the instruction.

(3) A person commits an offence of strict liability if the person contravenes subregulation (2).

Penalty: 50 penalty units.

91.585 Restraint and stowage of cargo

(1) This regulation does not apply in relation to the following kinds of cargo on an aircraft:
(a) an assistance animal carried in a passenger cabin;
(b) carry-on baggage;
(c) equipment that is required or permitted under these Regulations to be carried on the aircraft without being restrained or stowed;
(d) cargo to be dropped from the aircraft during a dropping operation.

(2) The operator and the pilot in command of an aircraft for a flight each contravene this subregulation if cargo carried on the flight is not:

(a) restrained using equipment that is approved under regulation 21.305 or 21.305A; or

(b) securely stowed in a place designed and approved for that purpose under Part 21; or

(c) for equipment of a foreign registered aircraft operating in Australian territory—restrained or stowed in accordance with any requirements under the law of the aircraft's State of registry or the State of the operator.

(3) A person commits an offence of strict liability if the person contravenes subregulation (2).

Penalty: 50 penalty units.

91.590 Restraint and stowage of carry-on baggage

(1) The pilot in command of an aircraft for a flight contravenes this subregulation if:

(a) either:

(i) the aircraft is taking off or landing; or

(ii) the pilot in command has directed that carry-on baggage be securely stowed; and

(b) an item of carry-on baggage is not:

(i) securely stowed in a place designed and approved under Part 21 (or in the case of a foreign aircraft, under the law of the aircraft's State of registry or the State of the operator) for that purpose; or

(ii) otherwise safely restrained.

Note: This regulation does not apply to the operation of an aircraft if regulation 121.265 applies to the operation: see regulation 91.035.

(2) A person commits an offence if the person contravenes subregulation (1).

Penalty: 50 penalty units.

91.595 Restraint and stowage of certain aircraft equipment

(1) The operator and pilot in command of an aircraft for a flight each contravene this subregulation if:

(a) either:

(i) the aircraft is taking off or landing; or

(ii) the pilot in command has directed that passenger service equipment or galley equipment be restrained or securely stowed; and

(b) the passenger service equipment or galley equipment is not restrained or securely stowed in a place intended for the purpose.

Note: This regulation does not apply to the operation of an aircraft if regulation 121.265 applies to the operation: see regulation 91.035.

(2) A person commits an offence if the person contravenes subregulation (1).

Penalty: 50 penalty units.

91.600 Carriage of cargo—general

(1) The operator and the pilot in command of an aircraft for a flight each contravene this subregulation if a requirement mentioned in subregulation (2) is not met for the flight.

(2) The requirements are the following:

(a) cargo must not be carried in a place where the cargo may damage, obstruct or cause the failure of:

(i) a control, electrical wiring or a pipeline of the aircraft; or

(ii) any other equipment that is essential to the safe operation of the aircraft;

(b) cargo must not be carried in a place where the weight of the cargo exceeds the load limitations for the floor structure or any other load bearing components of that place, as set out:

(i) in the aircraft flight manual instructions for the aircraft; or

(ii) on a placard on the aircraft;

(c) cargo (other than passenger service equipment or galley equipment in an aisle on a temporary basis while in use) must not obstruct an aisle;

(d) either:

(i) cargo must not obstruct, or restrict access to, an emergency exit; or

(ii) the operator or the pilot in command must hold an approval from CASA under regulation 91.045 for cargo to be carried in a manner that obstructs, or restricts access to, the emergency exit.

(3) A person commits an offence of strict liability if the person contravenes subregulation (1).

Penalty: 50 penalty units.

91.605 Carriage of cargo—cargo compartments

(1) The operator and the pilot in command of an aircraft for a flight each contravene this subregulation if:

(a) more than one flight crew member is required for the flight; and

(b) cargo is carried in a cargo compartment; and

(c) the design of the cargo compartment is such that if a fire were to occur during the flight, a crew member would need to enter the compartment to extinguish the fire; and

(d) the cargo is not loaded in a manner to allow a crew member to reach, at any time during the flight, all parts of the compartment with the contents of a hand-held fire extinguisher.

(2) A flight crew member is ***required*** for a flight if the flight crew member is one of the number of flight crew members required for the flight by:

(a) the aircraft flight manual instructions for the aircraft; or

(b) if a greater number is required by these Regulations—these Regulations.

(3) A person commits an offence of strict liability if the person contravenes subregulation (1).

Penalty: 50 penalty units.

91.610 Carriage of cargo—unoccupied seats

(1) The operator and the pilot in command of an aircraft for a flight each contravene this subregulation if:
  (a) cargo is carried on an unoccupied seat in the aircraft; and
  (b) a requirement mentioned in subregulation (2) is not met.

(2) The requirements are the following:
  (a) the cargo must not weigh more than:
    (i) 77 kg; or
    (ii) if the seat manufacturer permits a greater weight for the seat—that weight;
  (b) the cargo, and the means of restraint of the cargo, must not interfere with the safe operation of the aircraft.

(3) A person commits an offence of strict liability if the person contravenes subregulation (1).

Penalty: 50 penalty units.

91.615 Carriage of cargo—loading instructions

(1) This regulation applies in relation to cargo other than cargo that:
  (a) is carry-on baggage that weighs less than 9 kg and is stowed under a seat or in a place designed for that purpose; or
  (b) is carried on an unoccupied seat in accordance with regulation 91.610.

(2) The operator and the pilot in command of an aircraft for a flight each contravene this subregulation if, during the flight, cargo is not carried in the aircraft in a place that has a placard bearing the instructions for the carriage of the cargo in that place.

(3) A person commits an offence of strict liability if the person contravenes subregulation (2).

Penalty: 50 penalty units.

91.620 Carriage of animals

(1) A person contravenes this subregulation if:
  (a) the person brings an animal onto an aircraft for a flight; and
  (b) the person does not have permission from the pilot in command of the aircraft to do so.

(2) The pilot in command of an aircraft for a flight contravenes this subregulation if:

(a) the pilot in command of the aircraft gives permission for a person to bring an animal onto the aircraft for the flight; and

(b) the pilot in command does not take reasonable steps to ensure that carriage of the animal does not have an adverse effect on the safety of air navigation.

(3) The operator or the pilot in command of an aircraft for a flight may refuse to carry an assistance animal (within the meaning of the *Disability Discrimination Act 1992*) in the aircraft for the flight if the operator or pilot in command reasonably believes that the carriage of the animal for the flight may have an adverse effect on the safety of air navigation.

(4) Subregulation (3) has effect despite anything in the *Disability Discrimination Act 1992*.

(5) The Part 91 Manual of Standards may prescribe requirements relating to the carriage of animals on an aircraft for a flight.

(6) The pilot in command of an aircraft for a flight contravenes this subregulation if:

(a) the pilot in command is subject to a requirement mentioned in subregulation (5); and

(b) the requirement is not met for the flight.

(7) The operator of an aircraft for a flight contravenes this subregulation if:

(a) the operator is subject to a requirement mentioned in subregulation (5); and

(b) the requirement is not met for the flight.

(8) A person commits an offence of strict liability if the person contravenes subregulation (1), (2), (6) or (7).

Penalty: 50 penalty units.

Division 91.D.8—Instruments, indicators, equipment and systems

91.625 Use of radio—qualifications

(1) A person contravenes this subregulation if:
  (a) the person transmits on a radio frequency published in the AIP or NOTAMs that is:
    (i) used by Air Traffic Services; or
    (ii) used for communications at a certified aerodrome, a registered aerodrome, a military aerodrome or an aerodrome prescribed as a designated non-controlled aerodrome by the Part 91 Manual of Standards for the purposes of subparagraph 91.400(1)(a)(iv); or
    (iii) used in aeronautical emergencies; or
    (iv) of a kind prescribed by the Part 91 Manual of Standards for this subparagraph; and
  (b) the person is not authorised or qualified to do so:
    (i) for an Australian aircraft (other than a Part 103 aircraft or a Part 131 aircraft)—under Part 61, 64 or 65; or
    (ii) for a foreign registered aircraft—under the law of the aircraft's State of registry or the State of the operator; or
    (iii) for a Part 103 aircraft—by a Part 103 ASAO; or
    (iv) for a Part 131 aircraft—by a Part 131 pilot authorisation.

(2) A person commits an offence of strict liability if the person contravenes subregulation (1).

Penalty: 50 penalty units.

91.630 Use of radio—broadcasts and reports

(1) The pilot in command of an aircraft for a flight contravenes this subregulation if:
  (a) the aircraft is fitted with, or carries, a radio; and
  (b) during the flight, the pilot in command does not make a broadcast or a report relating to the flight that is prescribed by the Part 91 Manual of Standards for this paragraph.

(2) A person commits an offence of strict liability if the person contravenes subregulation (1).

Penalty: 50 penalty units.

91.635 Communication monitoring in controlled airspaces

(1) The pilot in command of an aircraft for a flight contravenes this subregulation if:
  (a) during the flight, the aircraft is flown in controlled airspace; and

(b) the pilot in command does not continuously monitor the primary communications medium used by air traffic control while flying in that airspace.

(2) A person commits an offence of strict liability if the person contravenes subregulation (1).

Penalty: 50 penalty units.

91.640 Use of radio outside controlled airspaces—listening watch of radio transmissions

(1) The pilot in command of an aircraft for a flight contravenes this subregulation if:
(a) the aircraft is fitted with, or carries, a radio; and
(b) the aircraft is flown by a pilot who is qualified, eligible or authorised to use the radio:
(i) for an Australian aircraft (other than a Part 103 aircraft or a Part 131 aircraft)—under Part 61 or 64; or
(ii) for a foreign registered aircraft—under a law of the aircraft's State of registry or the State of the operator; or
(iii) for a Part 103 aircraft—by a Part 103 ASAO; or
(iv) for a Part 131 aircraft—by a Part 131 pilot authorisation; and
(c) the aircraft is outside controlled airspace; and
(d) radio transmissions are not continuously monitored by:
(i) the pilot in command of the aircraft for the flight; or
(ii) another pilot who occupies a pilot seat during the flight.

(2) A person commits an offence of strict liability if the person contravenes subregulation (1).

Penalty: 50 penalty units.

91.645 Availability of instructions for flight data and combination recorders

(1) The operator of an aircraft for a flight contravenes this subregulation if, when the aircraft begins the flight:
(a) the aircraft is required to be fitted with a flight data recorder or combination recorder by these Regulations; and
(b) the operator does not have the instructions for the recorder available for immediate provision to the Australian Transport Safety Bureau.

(2) A person commits an offence of strict liability if the person contravenes subregulation (1).

Penalty: 50 penalty units.

91.650 Flight recorders—preserving recordings of immediately reportable matters

(1) The operator of an aircraft for a flight contravenes this subregulation if:
  (a) the aircraft is fitted with an operative flight data recorder, operative cockpit voice recorder or operative combination recorder; and
  (b) an immediately reportable matter occurs in relation to the aircraft; and
  (c) the requirement mentioned in subregulation (2) is not met.

(2) The requirement is that recordings from the flight data recorder, cockpit voice recorder and combination recorder related to the occurrence of the matter, and the recorders, are preserved:
  (a) if the Australian Transport Safety Bureau notifies the operator, within 72 hours of the matter being reported to the Australian Transport Safety Bureau under section 18 of the *Transport Safety Investigation Act 2003*:
    (i) that the operator is not required to preserve the recordings and recorders—until the time of that notification; or
    (ii) that the operator is required to preserve the recordings and recorders for a certain period—until the end of that period; or
    (iii) that the operator is required to preserve the recordings for a certain period but is not required to preserve the recorders—until the end of that period for the recordings, and until the time of that notification for the recorders; or
  (b) in any other case—until 72 hours after the matter is reported to the Australian Transport Safety Bureau under section 18 of the *Transport Safety Investigation Act 2003*.

(3) Subregulation (1) does not apply if:
  (a) the recordings or recorders are not preserved; and
  (b) the operator took reasonable steps in the circumstances to preserve the recordings or recorders.

(4) A person commits an offence of strict liability if the person contravenes subregulation (1).

  Penalty: 50 penalty units.

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

91.655 RVSM airspace

(1) The operator and the pilot in command of an aircraft for a flight each contravene this subregulation if:
  (a) the aircraft is flown in RVSM airspace; and
  (b) the requirement mentioned in subregulation (2) is not met.

(2) The requirement is that either or both of the following apply:
  (a) the operator of the aircraft holds:

(i) for an Australian aircraft—an approval under regulation 91.045; or
(ii) for a foreign aircraft—an approval by the national aviation authority of the aircraft's State of registry or of the State of the operator;

for the aircraft to be flown in RVSM airspace;

(b) the pilot in command has been given an air traffic control clearance or an air traffic control instruction for the aircraft to be flown in the RVSM airspace.

(3) The pilot in command of an aircraft for a flight contravenes this subregulation if:
(a) the aircraft is in RVSM airspace; and
(b) the aircraft becomes unable to operate with RVSM separation; and
(c) the pilot in command does not inform air traffic control as soon as practicable after the aircraft becomes unable to operate with RVSM separation.

(4) A person commits an offence of strict liability if the person contravenes subregulation (1).

Penalty: 50 penalty units.

(5) A person commits an offence if the person contravenes subregulation (3).

Penalty: 50 penalty units.

91.660 Performance-based navigation

(1) The pilot in command of an aircraft for a flight contravenes this subregulation if:
(a) the flight, or any part of the flight, is conducted using a navigation specification prescribed by the Part 91 Manual of Standards for the purposes of this paragraph; and
(b) neither the operator of the aircraft for the flight nor the pilot in command holds:
(i) for an Australian aircraft—an approval under regulation 91.045; or
(ii) for a foreign registered aircraft—an approval by the national aviation authority of the aircraft's State of registry or of the State of the operator;

to use that navigation specification during the flight or part of the flight.

(2) A person commits an offence of strict liability if the person contravenes subregulation (1).

Penalty: 50 penalty units.

Division 91.D.9—Miscellaneous

Note: This Division is reserved for future use.

Penalty: 50 penalty units.

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

91.680 Pilot in command to report emergencies

(1) The pilot in command of an aircraft for a flight contravenes this subregulation if, during the flight:

(a) an emergency occurs that threatens the safety of the aircraft or the persons on the aircraft; and

(b) the aircraft is fitted with, or carries, a means for the pilot in command to communicate with Air Traffic Services; and

(c) it is practicable to inform Air Traffic Services of the emergency; and

(d) the pilot does not inform Air Traffic Services, at the time that it is practicable to do so, of:

(i) the emergency; and

(ii) if the aircraft is carrying dangerous goods—the nature and state of the goods.

(2) A person commits an offence of strict liability if the person contravenes subregulation (1).

Penalty: 50 penalty units.

91.685 Multi-engine aircraft—pilot in command to land at nearest suitable aerodrome if emergency occurs

(1) The pilot in command of a multi-engine aircraft for a flight contravenes this subregulation if, during the flight:

(a) an emergency occurs that threatens the safety of the aircraft or the persons on the aircraft; and

(b) the pilot does not land at the aerodrome that is, in the circumstances, the nearest suitable aerodrome for the aircraft to land at.

(2) A person commits an offence of strict liability if the person contravenes subregulation (1).

Penalty: 50 penalty units.

91.690 Pilot in command to report contraventions relating to emergencies

(1) The operator and the pilot in command of an aircraft for a flight each contravene this subregulation if:

(a) during the flight, an emergency occurs that threatens the safety of the aircraft or the persons on the aircraft; and

(b) the emergency requires the pilot flying the aircraft to take action that involves a contravention of a provision of these Regulations; and

(c) neither the operator nor the pilot in command give CASA written notice, in the approved form, of the contravention and the circumstances of the contravention, within 2 business days after the day the emergency occurs.

(2) The pilot in command is not excused from giving notice under subregulation (1) on the ground that the giving of the notice, or the information in the notice, might tend to incriminate the pilot in command or expose the pilot in command to a penalty.

(3) The following are not admissible in evidence against the pilot in command in criminal proceedings other than proceedings for an offence against subsection 136.1(1) or (4), 137.1(1) or 137.2(1) of the *Criminal Code*:
(a) the information in the notice;
(b) any information, document or thing obtained as a direct or indirect consequence of giving the notice.

(4) A person commits an offence of strict liability if the person contravenes subregulation (1).

Penalty: 50 penalty units.

91.695 Interception of aircraft

(1) The Part 91 Manual of Standards may prescribe requirements to be met if an aircraft is intercepted by another aircraft during a flight.

(2) The pilot in command of an aircraft for a flight contravenes this subregulation if:
(a) the aircraft is intercepted by another aircraft during the flight; and
(b) a requirement mentioned in subregulation (1) is not met for the flight.

(3) A person commits an offence of strict liability if the person contravenes subregulation (2).

Penalty: 50 penalty units.

91.700 Aviation distress signals

(1) A person on an aircraft for a flight contravenes this subregulation if:
(a) the person has made an aviation distress signal; and
(b) the reason for making the signal no longer exists; and
(c) the state of the aircraft's radio and the location of the aircraft are such that the signal is able to be cancelled; and
(d) the person does not cancel the signal as soon as circumstances permit.

(2) A person commits an offence of strict liability if the person contravenes subregulation (1).

Penalty: 25 penalty units.

91.705 Flight in icing conditions—adherence of frost, ice or snow

(1) The pilot in command of an aircraft for a flight contravenes this subregulation if, when the aircraft begins the flight, frost, ice or snow is adhering to any of the aircraft's wings, flaps, control surfaces, rotors, propellers, horizontal stabilisers or vertical stabilisers.

(2) The pilot in command of an aircraft for a flight contravenes this subregulation if, when the aircraft begins a flight:

(a) the aircraft has frost, ice or snow adhering to the top of the aircraft's fuselage; and

(b) either:

(i) the aircraft has rear-mounted engines; or

(ii) the adherence of the frost, ice or snow to the top of the aircraft's fuselage is a hazard to the safe operation of the aircraft for the flight.

(3) Subregulation (1) or (2) does not apply if the take-off for the flight is conducted in accordance with the aircraft flight manual instructions for the aircraft that relate to taking off under the conditions mentioned in that subregulation.

(4) A person commits an offence of strict liability if the person contravenes subregulation (1) or (2).

Penalty: 50 penalty units.

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

91.710 Flight in icing conditions—requirements for flight

(1) This regulation applies to a flight of an aircraft if:

(a) when the flight begins, icing conditions are known or suspected for the flight path along which the aircraft will be flown; or

(b) both:

(i) during the flight, the aircraft flies into icing conditions; and

(ii) the pilot in command does not, as soon as practicable, change the aircraft's flight path to try and avoid the icing conditions.

(2) The pilot in command of an aircraft for a flight contravenes this subregulation if, when the flight began, the aircraft was not type certificated as complying with the airworthiness standards relating to flight in icing conditions.

(3) A person commits an offence if the person contravenes subregulation (2).

Penalty: 50 penalty units.

Division 91.D.11—Causing or simulating failures etc.

Subdivision 91.D.11.1—Causing or simulating instrument failure etc.

91.715 Causing or simulating failure of flight instruments

(1) The pilot in command of an aircraft for a flight contravenes this subregulation if, during the flight:
  (a) the failure of an instrument of any of the following kinds is caused or simulated:
    (i) an attitude indicator;
    (ii) a gyrocompass or an equivalent instrument;
    (iii) an airspeed indicator;
    (iv) an altimeter; and
  (b) a requirement mentioned in subregulation (2) is not met.

(2) The requirements are the following:
  (a) the flight must be conducted for the purpose of pilot training, checking or testing;
  (b) only crew members that are required for the training, checking or testing are carried on the flight;
  (c) a person who is authorised to pilot the aircraft under Part 61, by a Part 103 ASAO or by a Part 131 pilot authorisation (or in the case of a foreign aircraft, under the law of the aircraft's State of registry or the State of the operator):
    (i) must occupy a pilot seat fitted with a fully functioning set of flight controls; and
    (ii) if the flight is in IMC or at night—must have a clear view of an operative instrument of the same kind as the instrument subjected to failure or simulated failure.

(3) Subregulation (1) does not apply if the pilot in command is carrying out:
  (a) a maintenance test flight; or
  (b) a procedure to diagnose or isolate a failure of an instrument or system.

(4) A person commits an offence of strict liability if the person contravenes subregulation (1).

Penalty: 50 penalty units.

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

91.720 Simulating IMC flying

(1) The pilot in command of an aircraft for a flight contravenes this subregulation if:
  (a) during the flight, IMC are simulated; and

Regulation 91.800

(b) the requirement is not met for the flight.

(4) The operator of an aircraft for a flight contravenes this subregulation if:
(a) the operator is subject to a requirement mentioned in subregulation (1) for the flight; and
(b) the requirement is not met for the flight.

(5) A person commits an offence of strict liability if the person contravenes subregulation (3) or (4).

Penalty: 50 penalty units.

Subpart 91.J—Weight and balance

Note: This Subpart does not apply to the operation of an aircraft if Subpart 121.J, 133.J, 135.J or 138.J applies to the operation: see regulation 91.035.

91.805 Loading of aircraft

(1) The pilot in command of an aircraft for a flight contravenes this subregulation if, when the flight begins the aircraft is loaded in a way that contravenes the aircraft's weight and balance limits.

(2) The pilot in command of an aircraft for a flight contravenes this subregulation if, during the flight, the aircraft ceases to be operated in accordance with the aircraft's weight and balance limits.

(3) A person commits an offence of strict liability if the person contravenes subregulation (1) or (2).

Penalty: 50 penalty units.

Subpart 91.P—Cabin crew

Note: This Subpart does not apply to the operation of an aircraft if Subpart 121.P, 133.P or 135.P applies to the operation: see regulation 91.035.

91.820 Cabin crew—when required

(1) Subject to subregulations (2) and (3), a cabin crew member must be carried on a flight of an aircraft if 20 or more passengers are carried on the flight.

(2) Subregulation (1) does not apply if the flight involves a parachuting activity to which Part 105 applies.

(3) Subregulation (1) does not apply if:
  (a) the flight crew for the flight includes at least 2 pilots; and
  (b) no more than 22 passengers are carried on the flight; and
  (c) no more than 19 of the passengers are adults or children.

91.825 Cabin crew—number

(1) The operator and the pilot in command of an aircraft for a flight each contravene this subregulation if:
  (a) under regulation 91.820, a cabin crew member must be carried on the flight; and
  (b) when the aircraft begins the flight, the number of cabin crew members for the flight is not at least equal to the sum of one cabin crew member for each 50, or part of 50, passengers carried on the flight.

(2) A person commits an offence of strict liability if the person contravenes subregulation (1).

Penalty: 50 penalty units.

91.830 Cabin crew—knowledge of emergency and safety equipment and procedures

(1) This regulation applies in relation to a flight of an aircraft if, under regulation 91.820, a cabin crew member must be carried on the flight.

(2) The operator, a cabin crew member, and the pilot in command, of an aircraft for a flight each contravene this subregulation if:
  (a) the cabin crew member is not competent to:
    (i) operate and use emergency and safety equipment on the aircraft that is relevant to the cabin crew member's duties; and
    (ii) implement emergency evacuation procedures for the aircraft; and
  (b) the cabin crew member begins to carry out cabin crew member duties for the flight.

CHAPTER 7 FLIGHT PREPARATION (WEATHER ASSESSMENTS) REQUIREMENTS

7.01 Purpose

For subregulation 91.230 (1), this Chapter prescribes requirements relating to flight preparation and weather assessments (the ***flight preparation (weather assessments) requirements***).

7.02 Forecasts for flight planning

(1) Subject to subsection (1A), before commencing a flight, the pilot in command must study:

(a) authorised weather forecasts and authorised weather reports for:

(i) the route to be flown; and

(ii) the departure aerodrome, the planned destination aerodrome and any planned alternate aerodrome; and

Note See also subsection 8.04 (3).

(b) any other reasonably available weather information that is relevant to the intended operation.

(1A) If the information mentioned in paragraph (1) (a) is studied more than 1 hour before commencing the flight, the pilot in command must obtain, and review, an update to that information before the flight begins.

(2) For subparagraph (1) (a) (i), the authorised weather forecasts are as follows:

(a) 1 of the following:

(i) for an operation at or below 10 000 ft AMSL — a GAF or a GAMET area forecast;

(ii) for an operation above 10 000 ft AMSL — a SIGWX forecast;

(iii) for any operation — a flight forecast;

(b) a wind and temperature forecast.

(3) An authorised weather forecast used to satisfy the requirement under subparagraph (1) (a) (i) must cover the whole period of the flight for which it is to be used.

(4) For subparagraph (1) (a) (ii), for an IFR flight to a planned destination aerodrome with an IAP that a pilot is able to conduct, the authorised weather forecasts for the planned destination aerodrome and any planned alternate aerodromes must be an aerodrome forecast or an ICAO landing forecast.

(5) For subparagraph (1) (a) (ii), for an IFR flight to a planned destination aerodrome without an IAP, or with 1 or more IAPs none of which a pilot is able to conduct, the authorised weather forecasts must be the following:

(a) for the planned destination aerodrome — an aerodrome forecast, an ICAO landing forecast, or a GAF or a GAMET area forecast;

(b) for any planned alternate aerodrome — an aerodrome forecast or an ICAO landing forecast.

(5A) However, subsections (4) and (5) do not apply if the IFR flight is a Part 121 operation.

(6) An authorised weather forecast used to satisfy the requirement under subparagraph (1) (a) (ii) must be valid for at least 30 minutes before, and 60 minutes after, the planned ETA.

7.03 Flights unable to obtain an authorised weather forecast before departure

(1) Despite subsection 7.02 (1), an aircraft may commence a flight if:

(a) an authorised weather forecast or an authorised weather report for the flight is not available; and

(b) the pilot in command reasonably considers that the weather conditions at the departure aerodrome will permit the aircraft to return and land safely at the departure aerodrome within 1 hour after take-off.

(2) The pilot in command of a flight mentioned in subsection (1) (other than a flight that is a Part 121 operation) must return to the departure aerodrome if:

(a) the authorised weather forecast required for the planned destination aerodrome is not obtained within 30 minutes after take-off; and

(b) the pilot in command has not nominated a destination alternate aerodrome if required to do so by subsection 8.04 (3).

(3) The pilot in command of a flight that is a Part 121 operation must return to the departure aerodrome if the authorised weather forecasts required to satisfy the requirements under regulation 121.170 of CASR (Flight preparation (Part 121 alternate aerodromes) requirements) are not obtained within 30 minutes after take-off.

CHAPTER 8 FLIGHT PREPARATION (ALTERNATE AERODROMES) REQUIREMENTS

Division 8.1 Purpose and definitions

8.01 Purpose

For subregulation 91.235 (1), this Chapter prescribes requirements relating to flight preparation and alternate aerodromes (the ***flight preparation (alternate aerodrome) requirements***).

8.02 Definition of *relevant weather conditions*

(1) Subject to subsection (2), in this Chapter:

relevant weather conditions means the following weather conditions:

(a) for cloud — more than SCT below the alternate minima;

Note For alternate minima see section 8.08.

(b) for visibility — either:

(i) less than the alternate minima; or

(ii) equal to or more than the alternate minima but with a forecast of at least a 30% probability of fog, mist, dust or any other phenomenon restricting visibility below the alternate minima;

(c) for wind — a headwind, crosswind or downwind component more than the maximum for the aircraft;

(d) a thunderstorm or associated severe turbulence, or a forecast of at least a 30% probability of such an event.

(2) If flight planning for a flight is based on 1 of the following:

(a) a TAF3, where the ETA of the flight is within the first 3 hours of the TAF3 validity period (but not if that ETA falls outside the end time (if any) specified for the TAF3 service);

(b) an ICAO landing forecast;

then the definition in subsection (1) may be read as if there were no mention of probabilities in subparagraph (1) (b) (ii) and paragraph (1) (d).

8.03 Definition of *relevant IAP*

(1) In this Chapter:

relevant IAP for an aerodrome outside Australian territory is the IAP that the pilot in command of an aircraft determines has the second lowest minimum altitude of the IAPs that the aircraft is able to conduct at the aerodrome (***conductible IAPs***).

(2) For subsection (1), in determining which conductible IAP has the second lowest minimum altitude, the pilot in command must comply with the following constraints:

(a) the conductible IAPs that may be considered in determining the IAP with the lowest, and hence the second lowest, minimum altitudes must not both require use of the same radio navigation aid;

Note ***Radio navigation aid*** is a defined term in the CASR Dictionary. An example of this mandatory constraint is an aerodrome that has the following IAPs to a specific runway (from lowest to highest minimum altitude): an ILS with CAT I and CAT II minima that both require the use of a non-associated DME; a VOR that uses the same DME as the ILS; a GNSS with LNAV minima; and an NDB. The CAT II minima cannot be used and, therefore, cannot be the lowest

minimum altitude and VOR could not be considered to have the second lowest minimum altitude as it shares a required radio navigation aid with the ILS (namely, the same DME).

(b) CAT II and CAT III minimum altitudes must not be used in determining altitudes for the relevant IAP.

Division 8.2 Destination alternate aerodromes

8.04 Destination alternate aerodromes — weather

(1) Subject to subsection (2), the pilot in command of an aircraft must nominate a destination alternate aerodrome if the ETA at the planned destination aerodrome is during the period that:

(a) begins 30 minutes before the forecast commencement of relevant weather conditions at the planned destination aerodrome; and

(b) ends 30 minutes after the forecast ending of relevant weather conditions.

Note For relevant weather conditions, see section 8.02.

(2) If:

(a) flight planning is based on a TAF3; and

(b) the ETA at the planned destination aerodrome:

(i) is within the first 3 hours of the TAF3 validity; and

(ii) does not fall outside the end time (if any) specified for the TAF3 service;

then the pilot in command of an aircraft must nominate a destination alternate aerodrome if the ETA is during the period that:

(c) begins at the forecast commencement of relevant weather conditions at the planned destination aerodrome; and

(d) ends at the forecast ending of the relevant weather conditions.

(3) If the forecast for the planned destination aerodrome required by subparagraph 7.02 (1) (a) (ii) is not available then the pilot in command of an aircraft must nominate a destination alternate aerodrome.

(4) Subsections (1) and (2) do not apply if the pilot in command is operating an aircraft under the VFR by day within 50 NM of the departure aerodrome.

(5) Subsections (1) and (2) do not apply if:

(a) relevant weather conditions exist; and

(b) the pilot in command ensures that sufficient fuel is carried to permit the aircraft to hold at the planned destination aerodrome until the end of the period mentioned in subsection (1) or (2), as the case requires.

(6) Subsections (1) and (2) do not apply if:

(a) relevant weather conditions are forecast to occur on an intermittent or temporary basis; and

(b) the pilot in command ensures that sufficient fuel is carried to permit the aircraft to hold for:

(i) 30 minutes — when the forecast is based on a change indicator of INTER; or

(ii) 60 minutes — when the forecast is based on a change indicator of TEMPO.

(7) For subsection (6), if a forecast contains multiple change indicators of INTER or TEMPO, the fuel for holding that is required under paragraph (6) (b) must be that for the most limiting requirement.

(8) For subsections (1) and (2), if a forecast includes the change indicator BECMG:

(a) where the weather conditions within the BECMG element of the forecast represent a deterioration in any of the weather elements within the preceding element of the forecast — the change indication is to be applied from the start of the forecast BECMG period; and

(b) where the weather conditions within the BECMG element of the forecast represent an improvement in all of the weather elements within the preceding elements of the forecast — the change indication is to be applied from the end of the forecast BECMG period.

8.05 Destination alternate aerodromes — navigation

(1) The pilot in command of an aircraft must nominate a destination alternate aerodrome if a flight is an IFR flight by night to a planned destination aerodrome that is:

(a) not served by an IAP; or

(b) is served by 1 or more IAPs none of which the pilot in command is able to conduct.

(2) For a VFR flight by night, the pilot in command must nominate a destination alternate aerodrome that is within 1 hour's flight time of the planned destination aerodrome:

(a) unless:

(i) the planned destination aerodrome is served by a ground-based radio navigation aid; and

(ii) the aircraft is fitted with the appropriate radio navigation system capable of using the aid; and

(iii) the pilot in command is competent in using the aid; or

(b) unless:

(i) the aircraft is fitted with an approved GNSS; and

(ii) the pilot in command is competent in using the GNSS.

(3) If aircraft navigation is to be conducted using a GNSS receiver certified only to (E)TSO C-129, navigation to a destination alternate aerodrome must be planned using a navigation system other than GNSS.

8.06 Destination alternate aerodromes — aerodrome lighting

(1) If a flight is planned to land at night at an aerodrome that only has portable runway lighting, the pilot in command of an aircraft must nominate a destination alternate aerodrome unless reliable arrangements have been made for a qualified and responsible person to:

(a) attend the aerodrome during the period beginning at least 30 minutes before the ETA, and ending on completion of the aircraft's landing and taxiing (the ***landing period***); and

(b) display the portable lighting.

(2) If a flight is planned to land at night at an aerodrome with electric runway lighting, but without standby power, the pilot in command must nominate a destination alternate aerodrome unless:

(a) portable runway lights are available; and

(b) reliable arrangements have been made for a qualified and responsible person to:

(i) attend the aerodrome during the landing period; and

(ii) display the portable lighting in the event of a failure of the electric runway lighting.

(3) If a flight is planned to land at night at an aerodrome with PAL, the pilot in command must nominate a destination alternate aerodrome unless reliable arrangements have been made for a qualified and responsible person to:

(a) attend the aerodrome during the landing period; and

(b) manually switch on the runway lighting in the event of a failure of the PAL.

(4) The pilot in command of an aircraft fitted with a single VHF radiocommunication system may only nominate an aerodrome with PAL as a destination alternate aerodrome if:

(a) reliable arrangements have been made for a qualified and responsible person to be in attendance to manually switch on the aerodrome lighting; and

(b) the aircraft has:

(i) a HF radiocommunication system; and

(ii) 30 minutes of holding fuel.

Note There is no requirement for a responsible person to be in attendance on the ground. The requirement for holding fuel will allow ground staff to be alerted in the event of a failure of the aircraft's VHF radiocommunication system.

(5) Subsections (1) to (4) do not apply if the pilot in command ensures that sufficient fuel is carried to permit the aircraft to hold until first-light plus 10 minutes.

(6) A destination alternate aerodrome nominated in accordance with subsection (2) or (3) is not required to have standby power or portable runway lighting.

(7) In this section:

qualified, for a responsible person, means a person who is instructed in, and is competent to display, the standard runway lighting with portable lights.

8.07 Destination alternate aerodromes — restrictions

The pilot in command of an aircraft may nominate an aerodrome as a destination alternate aerodrome only if the aerodrome is:

(a) suitable as a planned destination aerodrome for the flight; and

(b) not itself an aerodrome for which the aircraft would require a destination alternate aerodrome; and

(c) not a helideck.

8.08 Alternate minima — Australian aerodromes

(1) For Table 8.08 (1), for a type of aircraft mentioned in an item of column 1, conducting the type of operation mentioned in the same item of column 2, the alternate minima for an aerodrome in Australian territory are those mentioned in the same item of column 3 (for altitude) and column 4 (for visibility), subject to any conditions mentioned in the same item of column 5.

Table 8.08 (1) Alternate minima at Australian aerodromes

	Column 1	Column 2	Column 3	Column 4	Column 5
Item	**Type of aircraft**	**Type of operation**	**Altitude**	**Visibility**	**Conditions**
1	Aeroplane or rotorcraft	IFR to aerodrome with an IAP the pilot is able to conduct	The alternate minima published on the instrument approach chart	The alternate minima published on the instrument approach chart	
2	Aeroplane or rotorcraft	(a) Day IFR to an aerodrome not served by an IAP; or (b) Day IFR to an aerodrome served by 1 or more IAPs none of which the pilot is able to conduct	LSALT for the final route segment plus 500 ft	8 km	*Note* See subsection 8.05 (1) for night IFR requirements
3	Aeroplane	Day VFR and night VFR	1 500 ft	8 km	
4	Rotorcraft	Day VFR	1 000 ft	3 km	Only for aerodromes in Class G airspace
		Day VFR and night VFR	1 500 ft	8 km	Only for aerodromes in airspace other than Class G airspace
		Night VFR	1 500 ft	8 km	

(2) Subject to subsection (3), special alternate minima are only available for operations by aircraft with the following:

(a) at least 2 localiser and glideslope receiving systems;

(b) at least 2 VOR receiving systems;

(c) at least 1 of the following combinations of distance measuring systems:

(i) 2 DME systems;

(ii) 2 GNSS;

(iii) 1 DME system and 1 GNSS.

(3) Special alternate minima must not be used in any of the following circumstances:

(a) when an aerodrome control service is not provided;

(b) when an authorised weather forecast or authorised weather report is not available for the aerodrome;

(c) when ground equipment associated with the approach aid has been continuously unserviceable for more than 7 days and continues to be unserviceable.

Note In the circumstance mentioned in paragraph (c), the non-availability of special alternate minima will be published in NOTAM.

8.09 Alternate minima — at foreign aerodromes

(1) Subject to subsection (2), the alternate minima for an aerodrome outside Australian territory (the ***relevant aerodrome***) are whichever 1 of the following provides the highest minima:

(a) the official alternate minima published in the State in which the aerodrome is located (the ***relevant State***);

(b) the circling minima for the aerodrome, plus:

(i) a cloud ceiling increment of 500 ft; and

(ii) a visibility increment of 2 km;

(c) the landing minima of the relevant IAP, plus the following:

(i) where the relevant State increments are published — those increments;

(ii) where relevant State increments are not published, or if the availability or reliability of the approach aid is doubtful:

(A) a cloud ceiling increment of 500 ft; and

(B) a visibility increment of 2 km;

(d) if the determination of the relevant IAP is based entirely on the minimum altitudes of precision approach procedures:

(i) a cloud ceiling of 400 ft; and

(ii) a visibility of 1 600 m;

(e) if the determination of the relevant IAP is not based entirely on the minimum altitudes of precision approach procedures:

(i) a cloud ceiling of 800 ft; and

(ii) visibility of 3 000 m.

(2) If:

(a) the aerodrome has straight-in procedures to a runway that are not suitable for the operation; and

(b) circling is permitted;

then the alternate minima must not be lower than that derived from paragraph (1) (b).

CHAPTER 10 MATTERS TO BE CHECKED BEFORE TAKE-OFF

10.01 Purpose

For subregulation 91.245 (1), this Chapter prescribes the checks to be carried out before take-off.

10.02 Matters to be checked before take-off

The prescribed checks are the following:

(a) a check to confirm that each aerodrome, air route and airway facility that the pilot plans to use for the flight will be available for use;

(b) a check of the following:

(i) all Head Office and FIR NOTAMs applicable to the en route phase of the flight;

(ii) all location-specific NOTAMs for relevant aerodromes;

(c) a check to confirm the availability of GNSS integrity if required by section 11.03 or 14.06;

(d) a check to confirm that:

(i) all equipment required to be fitted to, or carried on, the aircraft by or under the civil aviation legislation is available and functioning properly; and

(ii) emergency and survival equipment carried on the aircraft is readily accessible;

(e) a check to confirm that each crew member is fit to perform the crew member's duties;

(f) a check to confirm that:

(i) the aircraft's hatches, access ports, panels and fuel tank caps are secured; and

(ii) the control locks, covers and ground safety devices and restraints have been removed;

(g) if the aircraft is an Australian aircraft — a check to confirm that there is either:

(i) a certificate of release to service for the most recent maintenance carried out on the aircraft; or

(ii) a maintenance release for the aircraft;

(h) a check to confirm that the aircraft's flight controls have been tested and are functioning correctly;

(i) for each system fitted to the aircraft for measuring and displaying pressure altitude, a check of the system's accuracy in accordance with the procedures mentioned in this Chapter;

(j) if an amount of supplemental oxygen or protective breathing equipment is required by or under the civil aviation legislation to be carried on the aircraft for a flight crew member for the flight — checks to ensure the following (as the case requires):

(i) that the required amount of supplemental oxygen is available;

(ii) that the protective breathing equipment is operative;

(iii) that the oxygen mask is connected to the supply terminal;

(iv) that each communication system associated with the oxygen mask is operative;

(v) if the oxygen mask is adjustable — that the mask fits the flight crew member correctly.

10.03 Checking systems for measuring and displaying pressure altitude — general

(1) For paragraph 10.02 (i), this section sets out the requirements for checking aircraft systems for measuring and displaying pressure altitude (***pressure altitude systems***).

(2) If:

(a) an aircraft is at a known elevation (the ***site elevation***); and

(b) an accurate QNH is available;

then, before take-off, the pilot in command of the aircraft must check the accuracy of each of the aircraft's pressure altitude systems in accordance with this section.

Note For accurate QNH and site elevation — see section 10.06.

10.04 Checking pressure altitude systems — IFR flight

(1) The pilot in command of an IFR flight must consider any pressure altitude system with an error in excess of ±75 ft to be inoperative for the flight.

(2) If 2 pressure altitude systems are required for the category of operation, then:

(a) at least 1 system (the ***first system***) must read the site elevation to within 60 ft; and

(b) if the other system (the ***second system***) has an error between 60 ft and 75 ft — the pilot in command may conduct a flight to the first point of landing where the accuracy of the second system can be rechecked; and

(c) if, on rechecking, the second system shows an error in excess of 60 ft — the pilot in command must consider the second system to be inoperative for further IFR flight.

(3) If 1 pressure altitude system is required for the category of operation, but 2 are fitted, then:

(a) the pilot in command is permitted to conduct a flight if at least 1 system (the ***first system***) reads the site elevation to within 60 ft; and

(b) if the other system (the ***second system***) has an error in excess of 75 ft — the pilot in command must consider the second system to be inoperative for further IFR flight.

(4) If 1 pressure altitude system is required for the category of operation, and 1 is fitted, then:

(a) if the system has an error between 60 ft and 75 ft — the pilot in command is permitted to conduct a flight to the first point of landing where the accuracy of the system can be rechecked; and

(b) if, on rechecking, the system shows an error in excess of 60 ft — the pilot in command must consider the system to be inoperative for further IFR flight.

10.05 Checking pressure altitude systems — VFR flight

(1) A pressure altitude system with an accurate QNH is operative for a VFR flight only if the system reads site elevation to within:

(a) 100 ft; or

(b) at test sites above 3 300 ft — 110 ft.

(2) If an aircraft that is fitted with 2 pressure altitude systems continues to conduct a flight under the VFR with 1 of the systems erroneously reading more than 100 ft (or 110 ft

as the case may be), the pilot in command must consider the erroneous system to be inoperative for further VFR flight.

(3) For an aeroplane operation conducted under the VFR involving flight above FL 200, the pressure altitude system used must be checked against the accuracy requirements for such system usage under the IFR.

10.06 Accurate QNH and site elevation

(1) In this Chapter, a QNH is to be considered accurate only if it is provided by 1 of the following:

(a) AAIS;

(b) ATC;

(c) ATIS;

(d) AWIS;

(e) CA/GRS;

(f) WATIR.

(2) QNH contained in an authorised weather forecast must not be used for checking the accuracy of a pressure altitude system.

(3) Site elevation must be derived from aerodrome survey data that is:

(a) authorised in writing (as the case requires):

(i) by CASA; or

(ii) by an NAA; or

(b) supplied in writing by the relevant aerodrome operator.

CHAPTER 11 AIR TRAFFIC SERVICES — PRESCRIBED REQUIREMENTS

Division 11.1 Use of a class of airspace

11.01 Purpose and definition

(1) For subregulation 91.255 (1), this Division prescribes requirements in relation to the use by an aircraft of a class of airspace or a portion of a class of airspace.

(2) In this Division:

oceanic airspace means:

(a) for any airspace within an Australian FIR — the airspace within the lateral boundaries of an oceanic control area described in the AIP; or

(b) for any airspace not within an Australian FIR — the airspace:

(i) described by the relevant NAA as an oceanic control area; or

(ii) if subparagraph (i) does not apply — within an area, predominantly over an ocean or sea, where aircraft are unlikely to maintain VHF radiocommunications with an air traffic service.

Note The effect of subsection (2) is that the vertical limits of an oceanic control area have no relevance to the definition of ***oceanic airspace*** within an Australian FIR. At the commencement of this instrument, the AIP document describing the geographic boundaries of oceanic control areas is the Designated Airspace Handbook.

11.02 Transition altitude, transition layer and transition level

(1) This section applies to a flight using any class of airspace, whether controlled or uncontrolled, that is within an Australian FIR.

(2) The transition altitude is 10 000 ft.

(3) The transition level is as set out in Table 11.02 (3), so that for an area QNH mentioned in an item of column 1, the transition level is that mentioned in the same item of column 2.

Table 11.02 (3) — Transition level

	Column 1	**Column 2**
Item	**Area QNH**	**Transition level**
1	Equal to, or greater than, 1 013.2 hPa	FL 110
2	At least 997 hPa but less than 1 013.2 hPa	FL 115
3	At least 980 hPa but less than 997 hPa	FL 120
4	At least 963 hPa but less than 980 hPa	FL 125
5	Less than 963 hPa	FL 130

Note The intention is to retain a minimum buffer of 1 000 ft above the transition altitude.

(4) An aircraft must not cruise within the transition layer.

(5) For an operation at or below the transition altitude, an aircraft's altimeter setting must be:

(a) the current local QNH (either an accurate QNH as defined in section 10.06 or a forecast QNH) of a station along the route within 100 NM of the aircraft; or

(b) the current forecast area QNH.

Note Under section 10.03, if an aircraft is at a known elevation, and an accurate QNH is available, then, before take-off, the pilot in command of the aircraft must check the accuracy of each of the aircraft's pressure altitude systems.

(6) For an operation above the transition altitude, an aircraft's altimeter setting must be 1 013.2 hPa.

(7) On climb, after passing the transition altitude, but before levelling off, an aircraft's altimeter setting must be changed from QNH to 1 013.2 hPa.

(8) On descent, just before passing the transition layer, an aircraft's altimeter setting must be changed from 1 013.2 hPa to QNH.

11.03 Oceanic airspace

(1) This section applies to a flight in any class of airspace that is oceanic airspace.

Note ***Oceanic airspace*** is defined in section 11.01. At the commencement of this instrument, the AIP document specifying the geographic boundaries of oceanic control areas is the Designated Airspace Handbook.

(1A) In this subsection:

INS means inertial navigation system.

IRS means inertial reference system.

long range navigation system, or ***LRNS***, means a navigation system, capable of area navigation in oceanic airspace, that comprises an INS, or an IRS, or an approved GNSS position source.

(1B) The pilot in command of an aircraft that has been declared in a flight plan as capable of navigating to a navigation specification that is RNP 2, RNP 4 or RNP 10 must, immediately before entering oceanic airspace, ensure that a check has been completed that the aircraft has at least 2 independent and operative LRNSs capable of navigating to the required navigation specification (***capable LRNS***).

Note The requirements of this subsection do not override the minimum navigation system equipment requirements required by the Part 91, Part 121, Part 133 or Part 135 Manual of Standards.

(1C) If, as a result of the check mentioned in subsection (1B), the number of capable LRNSs is less than 2, the pilot in command of the aircraft must ensure that ATS is notified of the situation as soon as practicable.

(2) Before the departure of a flight planned to operate in oceanic airspace using GNSS, the pilot in command must obtain a prediction for GNSS FDE availability for the intended route.

(3) For subsection (2), the pilot in command must plan so that the maximum predicted duration of the loss of GNSS FDE availability is not more than:

(a) for an RNP-4 operation — 25 minutes; or

(b) for an RNP-10 operation — 34 minutes.

(4) The pilot in command of an aircraft whose approved GNSS can achieve LNAV accuracy of less than 0.3 NM using requisite GNSS satellites may disregard subsections (2) and (3).

Note ***Requisite GNSS satellites*** is defined in section 1.07.

11.04 Loss of GNSS integrity

(1) This section applies to a flight in any class of airspace, whether controlled or uncontrolled:

(a) that is within an Australian FIR; and

(b) for which the flight is:

(i) required to maintain regular contact with an ATS; or

(ii) being provided with a separation service by an ATS.

Note Regulation 91.630 requires certain flights to make regular reports or broadcasts to an ATS. Regulation 91.635 requires certain flights to continuously monitor the primary communications medium used by ATC in controlled airspace.

(2) The pilot in command of an aircraft must advise ATS if any of the following occurs:

(a) during an en route phase of flight — there is RAIM loss or loss of GNSS integrity for more than 5 minutes;

(b) during a terminal phase of flight — there is RAIM loss or loss of GNSS integrity;

(c) when ATS requests the provision of GNSS-derived information — RAIM or GNSS integrity is not available;

(d) when ATS grants a clearance or imposes a requirement based on GNSS-derived information — RAIM or GNSS integrity is not available;

(e) the GNSS receiver is in dead-reckoning mode, or experiences loss of its navigation function, for more than 1 minute.

(3) If a pilot has notified ATS of a RAIM loss or loss of GNSS integrity in accordance with subsection (2), the pilot must notify ATS when RAIM or GNSS integrity is restored.

11.05 Use and supply of distance information

(1) This section applies to a flight using any class of airspace, whether controlled or uncontrolled, that is within an Australian FIR.

(2) When supplying distance information requested by the ATS, the pilot in command must be satisfied that ATS is aware of the source and the point of reference of the distance measurement.

Note Here are examples of source and the point of reference: 115 GNSS ML VOR, 80 GNSS CTM NDB, 267 GNSS BEEZA 86 DME BN.

(3) When supplying GNSS-derived distance information, the pilot in command must ensure that the information is obtained:

(a) from an approved GNSS; and

(b) by reference to data from a valid database.

11.06 ACAS resolution advisory

In any class of airspace, whether controlled or uncontrolled, in the event of an ACAS resolution advisory (an ***RA***), the pilot in command of an aircraft must:

(a) respond immediately by following the RA as indicated, unless doing so would jeopardize the safety of the aircraft; and

(b) follow the RA even if there is a conflict between the RA and an ATC instruction to manoeuvre; and

(c) limit the alterations of the flight path to the minimum extent necessary to comply with the RA; and

(d) promptly return to the last assigned level when the conflict is resolved; and

(e) notify ATC when returning to the last assigned level.

Note When this section is complied with, an RA satisfies the requirements of subregulation 91.257 (2) that is, it is a defence to the offence of failing to comply with an ATC clearance or instruction.

11.07 RVSM airspace

(1) This section applies to a pilot in command of an aircraft conducting a flight in a class of airspace that is RVSM airspace.

(2) The pilot in command must conduct the flight in accordance with procedures published in the authorised aeronautical information.

(3) When changing levels in RVSM airspace in an Australian FIR, the pilot in command must ensure that the aircraft does not overshoot or undershoot its cleared FL by more than 150 ft.

(4) If the cleared FL cannot be maintained, the pilot in command must:

(a) inform ATC as soon as possible of the circumstances; and

(b) either:

(i) obtain a revised ATC clearance (a ***revised clearance***) before initiating any deviation from the cleared route or FL (the ***deviation***); or

(ii) if a revised clearance cannot be obtained before the deviation, obtain a revised clearance as soon as possible after the deviation.

(5) If it is not possible to obtain a revised clearance for an operation within RVSM airspace in an oceanic control area in an Australian FIR, the pilot in command may initiate a temporary lateral offset procedure with the intention of returning to the cleared route as soon as possible.

11.08 Requirements for flight in the NAT-HLA

(1) This section applies to a flight in a portion of a class of airspace that is the NAT-HLA.

(2) The pilot in command of an Australian aircraft must not operate in the NAT-HLA unless the operator of the aircraft holds an approval under regulation 91.045 to conduct operations in the NAT-HLA.

(3) CASA must not issue an approval mentioned in subsection (2), unless:

(a) the aircraft meets all of the requirements for operational approval and aircraft systems for flight in the NAT-HLA as specified in NAT Doc 007, *North Atlantic Operations and Airspace Manual,* as in force from time to time; and

(b) evidence of meeting the requirements mentioned in paragraph (a) is contained in 1 or more of the following documents:

(i) the AFM;

(ii) an original equipment manufacturer service letter;

(iii) any other document from the entity responsible for the design approval of the equipment;

(iv) if the operator holds an AOC, an aerial work certificate or a Part 141 certificate:

(A) the operator's exposition, operations manual or AOC; or

(B) any other civil aviation authorisation held by the operator.

Note NAT Doc 007, *North Atlantic Operations and Airspace Manual* contains requirements relating to, but not limited to, flight rules, flight plans, communications, navigation (PBN), surveillance, air traffic service provision, safety monitoring, air traffic flow management, special procedures, phraseology, SAR, meteorology and aeronautical information services.

11.09 Performance-based communication and surveillance requirements

(1) This section applies to a flight of an aircraft within any class of airspace, whether it is controlled or uncontrolled, that involves:

(a) the conduct of datalink operations using FANS 1/A; and

(b) the declaration of RCP or RSP capabilities for the aircraft on the flight plan for the flight.

(1A) In this section:

automatic dependent surveillance – contract, or ***ADS-C***, means a contract between ATC and an aircraft's system:

(a) for the reporting of aircraft position and other data via a datalink; and

(b) which specifies:

(i) under what conditions ADS-C reports are to be initiated; and

(ii) what data is to be contained in the reports.

communication services provider, or ***CSP***, means any public or private entity which, under a contract or agreement, provides communication services for general air traffic which may include services provided by a satellite service provider (***SSP***) or services provided by the CSP in its own capacity as an SSP.

controller-pilot datalink communications, or ***CPDLC***, is the means of communication between ATC and a pilot, using datalink for ATC communications.

datalink operations means aircraft operations using FANS 1/A avionics.

FANS 1/A, which is taken to include ***FANS 1/A+***, is a direct datalink communication between the pilot of an aircraft and ATC via FANS 1/A avionics and FANS 1/A ground end systems, based on EUROCAE ED-100A/RTCA DO-258A, or a later version, as in force from time to time.

performance-based communication, or ***PBC,*** means communication based on performance specifications applied to the provision of air traffic services.

performance-based communications and surveillance, or ***PBCS***, means the application of required communication performance (***RCP***) and required surveillance performance (***RSP***) specifications to ensure appropriate performance levels for relevant air traffic management operations.

performance-based surveillance, or ***PBS,*** means surveillance based on performance specifications applied to the provision of air traffic services.

RCP 240 is the value for the communication expiry time (namely, 240 seconds) after which the initiator of the communication is required to revert to an alternative procedure.

Note In the context of RCP, the initiator is normally an air traffic controller.

RCP allocation is a portion of an RCP parameter, and is a time value assigned to a specific component of the communication system used for transferring messages between aircraft and ATC.

RCP parameters are performance characteristics that:

(a) provide the basis for developing an RCP specification; and

(b) include RCP transaction time, RCP continuity, RCP availability and RCP integrity.

RCP pilot operational response time, or ***RCP PORT***, is an RCP allocation that specifies the maximum time for a flight crew member to recognise and respond to an ATC instruction.

required communication performance, or ***RCP specification***, means the requirements needed to support PBC, being requirements for the following:

(a) ATC and associated ground equipment;

(b) the communication service provider;

(c) aircraft equipment;

(d) flight crew members.

required surveillance performance (RSP) specification means the requirements needed to support PBS, being requirements for the following:

(a) ATC and associated ground equipment;

(b) the communication service provider;

(c) aircraft equipment.

RSP 180 is the value for the surveillance data delivery time (namely, 180 seconds) at which the surveillance data delivery is considered overdue.

Note RSP 180 means that 99.9% of surveillance data must be delivered in less than 180 seconds.

RSP allocation is a portion of an RSP parameter and is a time value assigned to a specific component of the communication system used for transferring surveillance reports from aircraft to ATC.

RSP parameters are performance characteristics that:

(a) provide the basis for developing an RSP specification; and

(b) include RSP data delivery time, RSP continuity, RSP availability and RSP integrity.

satellite service provider, or ***SSP,*** means an entity, or group of entities, that provides the portion of the communication system that involves the operation of 1 or more satellites.

Flight plan declaration of capability

(2) Before declaring RCP 240 or RSP 180 capabilities on a flight plan, the pilot in command of the aircraft must:

(a) check with the operator of the aircraft whether the operator has received advice from Airservices Australia that the relevant aircraft has consistently not met the operational criteria of RCP 240 and RSP 180 specifications; and

(b) if such advice has been received — be reasonably satisfied that the operator of the aircraft has ensured that the aircraft consistently meets the operational criteria of the specifications.

Note Airservices Australia monitors datalink communications in Australian-administered airspace and advises when operational criteria of RCP 240 and RSP 180 specifications are consistently not met.

(3) A declaration must not be made on a flight plan, submitted to ATS for a flight, that the aircraft has RCP capability or RSP capability unless:

(a) the declaration relates solely to RCP 240 or RSP 180 capabilities; and

(b) the requirements of subsections (4) to (7) are complied with at the time of the declaration.

Note It is ultimately a matter for the relevant aviation authority to be satisfied that an aircraft operator's declaration is, in actual fact, valid for the relevant aircraft at the time of any declaration, audit or inspection. A false declaration would constitute an offence under regulation 11.255 of the *Civil*

Aviation Safety Regulations 1998 and could result in other legal consequences under the *Civil Aviation Act 1988*.

Equipment

(4) The aircraft must:

(a) be equipped with avionics supporting ADS-C and CPDLC applications over FANS 1/A (the ***equipment***); and

(b) the equipment must be operative for the flight.

Aircraft documentation

(5) Subject to subsection (6), 1 of the following documents:

(a) the AFM;

(b) an original equipment manufacturer service letter;

(c) any other document from the entity responsible for the design approval of the aircraft datalink communications equipment;

must include a statement of compliance (an ***SOC***) indicating that:

(d) the aircraft system is approved for datalink communications using FANS 1/A avionics: and

(e) the aircraft datalink system meets the aircraft-allocated requirements of the RCP 240 and RSP 180 specifications.

(6) If a document mentioned in paragraph (5) (a), (b) or (c) does not include an SOC, the following may act as a temporary substitute pending the formal issue of the SOC, provided there has been no indication of non-compliance given by the State of Design — a copy of the aircraft operator's written and dated request to the appropriate design authority for an SOC which indicates the matters mentioned in paragraphs (5) (d) and (e).

Note Allocation requirements for RCP 240 and RSP 180 specifications are as defined in ICAO Doc 9869, *Performance-based Communications and Surveillance (PBCS) Manual*.

Communication service provider agreement

(7) Subject to subsection (8), the pilot in command must be reasonably satisfied that an agreement, or a relevant request under subsection (8), is in place between the aircraft operator and the CSP that includes the following terms and conditions:

(a) that there is adequate subnetwork coverage in the route flown;

(b) that there is to be notification of coverage and performance failures;

(c) that there is to be recording of datalink messages for 30 days;

(d) that datalink messages mentioned in paragraph (c) will be available on written request by:

(i) CASA; or

(ii) the national aviation authority responsible for the regulation of flight plans to whom the declaration of an RCP or RSP capability on the flight plan is made;

(e) that datalink messages will not be manipulated or altered;

(f) that network-allocated requirements for the RCP 240 and RSP 180 specification are met according to the definitions contained in ICAO Doc 9869, *Performance-based Communications and Surveillance (PBCS) Manual*.

(8) If the agreement between the operator of the aircraft and the CSP does not include the terms and conditions mentioned in subsection (7), the following may act as a temporary substitute pending the formal issue, as soon as practicable, of an agreement

that does include the terms and conditions (a ***revised agreement***) — a copy of the relevant operator's written and dated request to the appropriate CSP for a revised agreement (the ***relevant request***).

11.10 Australian domestic airspace — inoperative radio requirements

(1) This section applies to a flight within any class of airspace, whether controlled or uncontrolled, that is within an Australian FIR and is not specified in the AIP as an oceanic control area.

Note At the commencement of this instrument, the AIP document specifying the geographic boundaries of oceanic control areas is the Designated Airspace Handbook.

(2) If the radiocommunication system becomes inoperative during a flight, the pilot in command must do the following:

(a) if operating under the VFR in Class G or Class E airspace:

(i) select code 7600 on the aircraft transponder (if fitted); and

(ii) remain outside controlled airspace; and

(iii) assume the radiocommunication system is broadcasting and broadcast position and intentions on the frequency appropriate to the area of operation; and

(iv) as soon as practicable, descend below 5 000 ft to continue flight under the VFR;

(b) if operating under the VFR in Class A, B, C or D airspace or in a restricted area, or if operating under the IFR in any class of airspace whether controlled or uncontrolled:

(i) select code 7600 on the aircraft transponder (if fitted); and

(ii) assume the radiocommunication system is functioning and broadcast position and intentions on the frequency prescribed in the authorised aeronautical information; and

(iii) if the aircraft is in VMC and certain of maintaining VMC — remain in VMC and land at the most suitable aerodrome; and

(iv) if the aircraft is in IMC or is uncertain of maintaining VMC:

(A) maintain the last assigned altitude or level (or LSALT if higher) for 3 minutes; and

(B) maintain the last assigned vector for 2 minutes, or fly one more holding pattern; and

(C) after complying with sub-subparagraphs (A) and (B) — proceed in accordance with the latest ATC route clearance acknowledged; and

(D) commence descent in accordance with latest ATC route clearance acknowledged; and

(E) conduct the most suitable IAP.

11.10A Mandatory broadcast area requirements

(1) This section applies to the pilot in command of a flight in a mandatory broadcast area (an ***MBA***) mentioned in subsection (2).

(2) A volume of Class G airspace within the Australian FIR is an MBA if it is so specified in the AIP, as in force from time to time.

Note 1 At the commencement of this instrument, the AIP specifies which broadcast areas are mandatory broadcast areas and also the lateral and vertical boundaries of each MBA.

Note 2 This section contains MBA requirements **other than those** for the specific radio broadcasts or reports required to be made in relation to an MBA, or the radio carriage or fitment requirements for flight within an MBA. Radio broadcast and report requirements for an MBA are contained in section 21.09. Radio carriage or fitment requirements for an MBA are contained in section 26.18.

(3) For an MBA mentioned in an item of column 1 of Table 11.10A (3), the pilot in command must comply with the requirements mentioned in column 2 of the same item.

Table 11.10A (3) — Mandatory Broadcast area requirements

	Column 1	**Column 2**
Item	**Mandatory Broadcast Area**	**Requirements**
1	Ayers Rock MBA	Nil
2	Ballina/Byron Gateway MBA	When an SFIS is active for this MBA, operations in the MBA, or immediately before entering the MBA, must be conducted in accordance with the AIP.
3	Port Hedland MBA	Nil

Division 11.2 Use of controlled aerodromes, control areas and control zones

11.11 Purpose

For subregulation 91.255 (1), this Division prescribes requirements in relation to the use by an aircraft of a controlled aerodrome, a control area or a control zone.

Note Regulation 91.405 also places certain requirements on the pilot in command in relation to operations conducted at controlled aerodromes.

11.12 Readback of ATC clearances and instructions

(1) This section applies to the pilot in command of an aircraft in relation to the use by the aircraft of a controlled aerodrome, a control area or a control zone.

(2) The pilot in command must:

(a) read back to an air traffic controller the safety-related parts of any ATC clearance or instruction which the controller has transmitted by voice (a ***relevant ATC clearance or instruction***); or

(b) ensure that another flight crew member (if any) does the reading back.

(3) Without affecting subsection (2), the following parts of a relevant ATC clearance or instruction must always be read back to the air traffic controller:

(a) ATC route clearances, including any amendments;

Note ATC route clearances include departure, en route, arrival and approach clearances.

(b) en route holding instructions;

(c) route and runway-holding positions specified in a taxi clearance;

(d) clearances, conditional clearances and instructions to taxi on, enter, line up on, wait on, land on, take off from, hold short of, cross, or backtrack on, any runway; and

(e) the assigned runway or HLS, altimeter settings, Mode A transponder codes, data link logon addresses, altitude instructions, heading and speed instructions;

(f) radio frequency instructions.

11.13 Controlled aerodromes

(1) Aircraft operations at a controlled aerodrome must be conducted in accordance with the authorised aeronautical information.

(2) Subject to subsection (3), the pilot in command of an aircraft operating at a controlled aerodrome must obtain ATC clearance to do any of the following:

(a) taxi on any part of the manoeuvring area;

(b) enter, cross, or backtrack on, a runway;

(c) take-off;

(d) land.

(3) Subsection (2) does not apply when an ATC service is not in operation for the aerodrome.

(4) Subject to subsection (5), the pilot in command of an aircraft taxiing on the manoeuvring area of a controlled aerodrome:

(a) must stop and hold at all illuminated stop bars; and

(b) may only proceed beyond the stop bars when the stop bar lights are switched off.

(5) Despite subsection (4), the pilot in command of the aircraft may proceed beyond a lighted stop bar if ATC:

(a) advises the pilot that stop bar contingency measures are in effect for the stop bar; and

(b) identifies the relevant lighted stop bar to the pilot by reference to the specific holding position; and

(c) instructs the pilot to cross the lighted stop bar.

11.14 Controlled aerodromes — other requirements

RESERVED

Note This section has been reserved to preserve the MOS structure for any future provisions that would be appropriate following consultation.

11.15 Control zones and control areas — entry into Class A, B, C, D or E airspace

(1) Subject to subsections (2) and (3), a pilot in command of an aircraft must not enter a control zone or a control area that is Class A, B, C, D or E airspace without ATC clearance.

(2) Despite subsection (1), a VFR flight does not require clearance to enter Class E airspace.

(3) Subsection (1) does not apply when an ATC service is not in operation for the control zone or the control area.

11.16 Control zones and control areas — operating within

(1) Aircraft operations in a control zone or a control area must be conducted in accordance with the authorised aeronautical information.

(2) The pilot in command of an aircraft operating in a control zone or a control area must take positive action to regain track as soon as a deviation from the cleared track is recognised.

11.17 Control areas – IFR flights – VFR climb/descent and VFR-on-top

(1) The pilot in command of an IFR flight must obtain clearance for a VFR climb or VFR descent in a control area.

(1A) A pilot in command of an IFR flight may only request a clearance for a VFR climb or VFR descent in a control area that is Class D or Class E airspace.

(2) During the VFR climb or VFR descent, the pilot in command must:

(a) be in VMC at all times; and

(b) comply with IFR reporting and communication requirements; and

Note See Division 21.2.

(c) maintain separation from other aircraft; and

(d) visually maintain obstacle clearance.

(3) The pilot in command of an IFR flight must obtain clearance for VFR-on-top operations.

(3A) A pilot in command of an IFR flight may only request a clearance for a VFR-on-top operation in a control area that is Class E airspace.

(4) During the VFR-on-top operation, the pilot in command must:

(a) be in VMC at all times; and

(b) comply with IFR reporting and communication requirements; and

Note See Division 21.2.

(c) maintain separation from other aircraft; and

Note Pilots are advised that maintaining separation from other aircraft includes wake turbulence separation.

(d) operate on specified VFR cruising levels.

(5) The pilot in command of an IFR flight must obtain ATC clearance to cancel the VFR climb or VFR descent, or the VFR-on-top operation.

11.18 Certain oceanic control areas — inoperative radio requirements

(1) This section applies to a flight that is within Australian-administered airspace specified in the AIP as an oceanic control area.

Note At the commencement of this instrument, the AIP document specifying the geographic boundaries of oceanic control areas is the Designated Airspace Handbook.

(2) If the radiocommunication system becomes inoperative during the flight, the pilot in command must do the following:

(a) set code 7600 on the aircraft's transponder (if fitted);

(b) assume the radiocommunication system is broadcasting and, using the frequency appropriate to the area of operation:

(i) broadcast position and intentions; and

(ii) make normal position reports;

(c) keep a lookout for conflicting traffic, including by reference to ACAS and traffic displays;

(d) as far as practicable, turn on all exterior aircraft lights;

(e) maintain the last assigned speed and level for a period of 60 minutes following the aircraft's failure to report its position over a compulsory reporting point (including ADS-C flights), and thereafter adjust speed and altitude in accordance with the filed flight plan;

(f) upon exiting the oceanic control area, conform, as far as practicable, to the relevant State procedures and regulations.

Division 11.3 Prohibited, restricted and danger areas

11.19 Purpose

For subregulation 91.255 (1), this Division prescribes requirements in relation to the use by an aircraft of a prohibited area, a restricted area or a danger area.

11.20 Prohibited areas

Note For prohibited areas, see CASA's OAR 6-monthly *Designation of Prohibited, Restricted and Danger Areas – Declaration and Determination (Permanent PRDs) Instruments* and the relevant Designated Airspace Handbooks, as each exists, or is in force, from time to time. Entry or flight in a prohibited area is an offence under regulations 6, 15 and 16 of the *Airspace Regulations 2007* and regulation 91.260 of Part 91 of CASR.

11.21 Restricted areas

Note For restricted areas, see CASA's OAR 6-monthly *Designation of Prohibited, Restricted and Danger Areas – Declaration and Determination (Permanent PRDs) Instruments* and the relevant Designated Airspace Handbooks, as each exists, or is in force, from time to time. Unauthorised entry or flight in an active restricted area is an offence under regulations 6, 15 and 16 of the *Airspace Regulations 2007* and regulation 91.260 of Part 91 of CASR.

11.22 Danger areas

The pilot in command of an aircraft may fly within or across a danger area, but only if the pilot complies with any applicable requirements or conditions expressed in the following:

(a) until the end of 14 June 2023:

(i) a declaration of the area as a danger area, made under regulation 6 of the *Airspace Regulations 2007* (the ***AsR***), as in force from time to time; and

(ii) instrument *CASA 26/21 – Direction – Australian Aircraft and Foreign Registered Aircraft in Australian-administered Airspace Instrument 2021* (***CASA 26/21***), or any CASA instrument that is expressed to be a successor instrument to CASA 26/21, as in force from time to time; or

(b) from 15 June 2023 — a declaration of the area as a danger area, made under regulation 6 of the AsR, as amended by the *Airspace Amendment (Danger Areas) Regulations 2022.*

Note 1 It is expected that a regulation amendment, to be known as the *Airspace Amendment (Danger Areas) Regulations 2022*, will make amendments to regulation 6 of the AsR in relation to danger areas that will affect section 11.22 on and from 15 June 2023 when the first *Designation of Prohibited, Restricted and Danger Areas – Declaration and Determination (Permanent PRDs) Instrument* for 2023 takes effect (see also Note 2).

Note 2 Danger area declarations are made or revised by CASA approximately every 6 months in the instrument known as *Designation of Prohibited, Restricted and Danger Areas – Declaration and Determination (Permanent PRDs) Instruments.* The declarations also appear in the Designated Airspace Handbooks, as each exists or is in force in the AIP, at the time of the flight.

Note 3 Flight in a danger area is subject to compliance with this section. The pilot in command of an aircraft should be aware of the specific activity which causes an area to be a danger area, and, while complying with this section, take appropriate precautions against any safety risks that could arise from the flight.

Note 4 It is an offence under subregulation 91.255 (2) to not comply with the section 11.22 requirements for a danger area.

CHAPTER 12 MINIMUM HEIGHT RULES

12.01 Minimum height rules — populous areas and public gatherings

(1) For paragraph 91.265 (4) (a), for flight over a populous area or a public gathering, this section prescribes take-off and landing circumstances for the purposes of paragraphs 91.265 (2) (b) and (3) (b).

Note For an aeroplane and a rotorcraft, paragraphs 91.265 (2) (b) and (3) (b), respectively, permit flight over a populous area or a public gathering below 1 000 ft above the highest feature or obstacle within a horizontal radius of 600 m or 300 m, respectively, of the point on the ground or water immediately below the aircraft.

(2) For subsection (1), the circumstances are when the following requirements are complied with:

(a) for take-off — when, from the point of lift-off, the pilot in command is conducting a climb to the planned cruising level in accordance with normal procedures for the aircraft type;

(b) for landing — when the pilot in command is conducting a continuous descent from the cruising level or circuit height to the landing threshold using rates of descent and flight manoeuvres which are normal for the aircraft type.

12.02 Minimum height rules — other areas

(1) For paragraph 91.267 (3) (a), for flight over an area other than a populous area or a public gathering, this section prescribes take-off and landing circumstances for the purposes of paragraph 91.267 (2) (b).

(2) For subsection (1), the circumstances are when the following requirements are complied with:

(a) for take-off — when, from the point of lift-off, the pilot in command is conducting a climb to the planned cruising level in accordance with normal procedures for the aircraft type;

(b) for landing — when the pilot in command is conducting a circling manoeuvre as part of an authorised IAP using rates of descent and flight manoeuvres which are normal for the aircraft type;

(c) for landing — when the pilot in command is conducting a continuous descent from the cruising level or circuit height to the landing threshold using rates of descent and flight manoeuvres which are normal for the aircraft type.

12.03 Minimum heights — VFR flight at night

For paragraph 91.277 (2) (e), this section prescribes an additional method for calculating the lowest altitude for a route or route segment as the minimum height for a VFR flight at night.

RESERVED

Note No requirements are currently prescribed. This section has been reserved to preserve the MOS structure for any future provisions that would be appropriate following consultation.

CHAPTER 13 VFR FLIGHTS

13.01 Purpose

For subregulation 91.273 (1), this Chapter prescribes requirements relating to the operation of an aircraft for a VFR flight.

13.02 VFR flight navigation requirements

(1) When navigating by visual reference to the ground or water, the pilot in command must, at intervals of not more than 30 minutes, positively fix the aircraft's position by visual reference to features marked on topographical charts.

(2) For subsection (1), when navigating by visual reference over the sea, visual reference features may include rocks, reefs and fixed human-made objects that are:

(a) marked on topographical charts appropriate for the flight; and

(b) readily identifiable from the air.

(3) When not navigating by visual reference to the ground or water, the pilot in command must comply with the requirements in Chapter 14, as if the flight were an IFR flight.

(4) The pilot in command of an aircraft may:

(a) operate in an airspace or on a route designated as requiring use of a particular navigation specification; or

(b) conduct a terminal instrument flight procedure designated as requiring use of a particular navigation specification;

but only if the aircraft is approved for operation, under the particular navigation specification, by at least 1 of the following:

(c) the AFM;

(d) a document approved under Part 21 of CASR as part of, or based on, an airworthiness assessment;

(e) for a foreign-registered aircraft — a document approved in writing by the NAA of the State of registration or State of the operator of the aircraft.

(5) If the pilot in command is engaged in any of the following:

(a) operating in an airspace or on a route that requires the use of GNSS;

(b) conducting a terminal instrument flight procedure that requires the use of GNSS;

(c) conducting a terminal instrument flight procedure using GNSS as a substitute or alternative for a ground-based navigation aid within the meaning of subsection 14.05 (1);

then the operation must be conducted using an approved GNSS.

CHAPTER 19 FUEL REQUIREMENTS

19.01 Purpose

For subregulation 91.455 (1), this Chapter prescribes requirements relating to fuel for aircraft.

19.02 Definitions of *final reserve fuel* and *contingency fuel*

The final reserve fuel and contingency fuel that must be carried on board an aircraft for a flight must conform to the requirements set out in Table 19.02 (2) so that, for an aircraft mentioned in an item of column 1 of the Table, in the kind of flight mentioned for the aircraft in column 2, the final reserve fuel flight time, and the contingency fuel amount, must be as mentioned in columns 3 and 4 respectively for the item.

Table 19.02 (2) — Final reserve fuel and contingency fuel requirements

	Column 1	Column 2	Column 3	Column 4
Item	**Aircraft (by aircraft category)**	**Kind of flight (by flight rules)**	**Final reserve fuel flight time**	**Contingency fuel amount**
1	Aeroplane with MTOW <= 5 700 kg (piston engine or turboprop)	VFR	30 minutes	N/A
2	Aeroplane with MTOW <= 5 700 kg (piston engine or turboprop)	Night VFR	45 minutes	N/A
3	Aeroplane with MTOW <= 5 700 kg (piston engine or turboprop)	IFR	45 minutes	N/A
4	Turbojet engine aeroplane, or aeroplane with MTOW > 5 700 kg (turboprop engine)	IFR or VFR	30 minutes	5% of trip fuel
5	Aeroplane with MTOW > 5 700 kg (piston engine)	IFR or VFR	45 minutes	5% of trip fuel
6	Rotorcraft	VFR	20 minutes	N/A
7	Rotorcraft	IFR	30 minutes	N/A

Note Table 19.02 (2) describes the required final reserve fuel and contingency fuel by aircraft type and flight rules.

19.03 General requirements

Fuel consumption data

(1) When determining the amount of usable fuel required under this Chapter for a flight of an aircraft, the pilot in command must use 1 of the following fuel consumption data sources:

(a) the most recent aircraft specific fuel consumption data derived from the fuel consumption monitoring system used by the operator of the aircraft (if available);

(b) the aircraft manufacturer's data for the aircraft.

Note The aircraft manufacturer's data includes electronic flight planning data. The manufacturer's data may be in the AFM, cruise performance manuals or other publications.

Operational requirements etc.

(2) In determining the amount of usable fuel required under this Chapter, the pilot in command must take into account the effect of the following matters:

(a) the operating conditions for the proposed flight, including the following:

(i) the actual weight (if known or available), or the anticipated weight, of the aircraft;

(ii) relevant NOTAMs;

(iii) relevant authorised weather forecasts and authorised weather reports;

(iv) relevant air traffic service procedures, restrictions and anticipated delays;

(v) the effects of deferred maintenance items and configuration deviations;

(b) the potential for deviations from the planned flight because of unforeseen factors.

19.04 Amount of fuel that must be carried for a flight

(1) The pilot in command of an aircraft must ensure that, when a flight of the aircraft commences, the aircraft is carrying on board at least the following amounts of usable fuel:

(a) taxi fuel;

(b) trip fuel;

(c) destination alternate fuel (if required);

(d) holding fuel (if required);

(e) contingency fuel (if applicable);

(f) final reserve fuel;

(g) additional fuel (if applicable).

(2) The pilot in command must ensure that, at any point of in-flight replanning, the aircraft is carrying on board at least the following amounts of usable fuel:

(a) trip fuel from that point;

(b) destination alternate fuel (if required);

(c) holding fuel (if required);

(d) contingency fuel (if applicable);

(e) final reserve fuel;

(f) additional fuel (if applicable).

(3) The pilot in command must ensure that the aircraft is carrying on board at least the following amounts of usable fuel, required at any time to safely continue the flight:

(a) trip fuel from that time;

(b) destination alternate fuel (if required);

(c) holding fuel (if required);

(d) final reserve fuel;

(e) additional fuel (if applicable).

(4) If, after commencement of the flight, fuel is used for a purpose other than that originally intended during pre-flight planning, the pilot in command must reanalyse the planned use of fuel for the remainder of the flight, and adjust the parameters of the

flight in so far as is necessary to remain in compliance with the requirements of this Chapter.

(5) Subsection (6) applies if an aircraft for a flight:

(a) is unable to land at the planned destination aerodrome; and

(b) diverts to the planned destination alternate aerodrome that was required for the flight.

(6) Despite subsection (3), the pilot in command must ensure that the aircraft is carrying at least the following amounts of usable fuel:

(a) destination alternate fuel from the time of commencing the diversion;

(b) holding fuel (if required);

(c) final reserve fuel.

19.05 Procedures for determining fuel before flight and fuel monitoring during a flight

(1) The pilot in command of an aircraft for a flight must ensure that the amount of usable fuel on board the aircraft is determined before the flight commences.

(2) The pilot in command must ensure that the amount of fuel is checked at regular intervals throughout the flight, and that the usable fuel remaining is evaluated to:

(a) compare planned fuel consumption with actual fuel consumption; and

(b) determine the amount of usable fuel remaining; and

(c) determine whether the remaining usable fuel is sufficient to satisfy:

(i) if a point of in-flight replanning has been specified by the pilot in command for the flight and the flight has not proceeded past the point — the requirements of subsection 19.04 (2); and

(ii) otherwise — the requirements of subsection 19.04 (3); and

(d) determine the amount of usable fuel expected to be remaining when the aircraft lands at the destination aerodrome.

19.06 Procedures if fuel reaches specified amounts

(1) If, at any time during a flight, the amount of usable fuel remaining in the aircraft on landing at the destination aerodrome will be, or is likely to be, less than the fuel required under subsection 19.04 (3), then the pilot in command must:

(a) take into account the likely air traffic and operational conditions on arrival at:

(i) the destination aerodrome; and

(ii) if a destination alternate aerodrome is required for the flight — the destination alternate aerodrome; and

(iii) any en route alternate aerodrome; and

(b) proceed to an aerodrome mentioned in paragraph (a) that enables the pilot in command to continue to meet the requirements in section 19.04.

(2) The pilot in command must request from ATS the duration of any likely delay in landing if unforeseen factors could result in the aircraft landing at the destination aerodrome with less than the following amounts of fuel remaining:

(a) the final reserve fuel;

(b) the destination alternate fuel (if required).

(3) The pilot in command must declare to ATS a "minimum fuel" state if:

(a) the pilot in command is committed to land the aircraft at an aerodrome in accordance with this section; and

(b) the pilot in command determines that, if there is any change to the existing ATC clearance issued to the aircraft in relation to that aerodrome, the aircraft will land with less than the final reserve fuel remaining.

Note 1 The declaration of "minimum fuel" informs ATS that all planned aerodrome options have been reduced to a specific aerodrome of intended landing, and any change to the existing clearance may result in landing with less than final reserve fuel. This is not an emergency situation, but an indication that an emergency situation is possible should any additional delay occur.

Note 2 A pilot in command should not expect any form of priority handling because of a "minimum fuel" declaration. ATS will, however, advise the flight crew member of any additional expected delays, and coordinate when transferring control of the aircraft to ensure other ATS units are aware of the aircraft's fuel state.

(4) If, at any time during a flight, the amount of usable fuel remaining in the aircraft on landing at the nearest aerodrome where a safe landing can be made, will be, or is likely to be, less than the final reserve fuel, then the pilot in command must declare a situation of "emergency fuel" by broadcasting "MAYDAY, MAYDAY, MAYDAY FUEL".

Note The emergency fuel declaration is a distress message.

19.07 Operational variations — procedures and requirements

(1) This section applies only to the following operators (a ***relevant operator***):

(a) a Part 141 operator or a Part 142 operator;

(b) an aerial application operator;

(c) an aerial work operator.

Note These operators are defined in section 1.07, Definitions.

(2) Despite sections 19.03 and 19.04, a relevant operator may use an operational variation, specified in the operator's operations manual or exposition (as applicable) for the purpose of this section, that relates to the calculation of any of the following, if the requirements in subsections (5) and (7) are met:

(a) taxi fuel;

(b) trip fuel;

(c) contingency fuel (if any);

(d) destination alternate fuel;

(e) additional fuel.

(3) The operations manual or exposition (as applicable) of a relevant operator must not include an operational variation relating to the calculation of holding fuel.

(4) The operations manual of an aerial application operator or an aerial work operator may include an operational variation relating to the calculation of final reserve fuel for an aerial application operation or an aerial work operation, as the case requires, provided that only flight crew members are carried for the operation.

(5) At least 28 days before using an operational variation, a relevant operator must submit to CASA:

(a) evidence of at least 1 of the following, that demonstrates how the operational variation will maintain or improve aviation safety:

(i) documented in-service experience;

(ii) the results of a specific safety risk assessment conducted by the relevant operator that meets the requirements of subsection (6); and

(b) a copy of the relevant operator's procedures proposed for inclusion in the operations manual or exposition (as applicable), in relation to using the operational variation.

Note Under regulations 137.080, 137.085, 137.090, 138.068, 141.100 and 142.155 of CASR (as applicable), CASA may direct the relevant operator to remove or revise the operational variation, if CASA were to find there was insufficient evidence that it would maintain or improve aviation safety.

(6) For subparagraph (5) (a) (ii), a specific safety risk assessment must include at least the following:

(a) flight fuel calculations;

(b) the capabilities of the relevant operator, including:

(i) a data-driven method that includes a fuel consumption monitoring program; and

(ii) the use of sophisticated techniques for determining the suitability of alternate aerodromes; and

(iii) specific risk mitigating measures.

(7) For the purposes of subsection (2), the relevant operator's operations manual or exposition (as applicable) must include procedures in relation to the use of the operational variation.

CHAPTER 20 SAFETY OF PERSONS AND CARGO ON AIRCRAFT

Division 20.1 Seating for persons on aircraft

20.01 Medical transport operations, rescue operations and certain police operations — prescribed circumstances

(1) For subregulation 91.545 (2), subregulation 91.545 (1) does not apply in relation to the carriage of a person for a flight if prescribed circumstances apply.

Note Subregulation 91.545 (1), makes it an offence to begin a flight if a person is assigned a seat or berth that is not fitted with a seatbelt or shoulder harness.

(2) For subsection (1), the prescribed circumstances are as follows:

(a) the flight must be a medical transport operation, a rescue operation or a SOG operation;

(b) the person must be a:

(i) crew member; or

(ii) for a medical transport operation — a medical patient; or

(iii) for a rescue operation — person who has been rescued; or

(iv) for a SOG operation — SOG member;

(c) during the flight — the person must:

(i) wear a safety harness and a restraint strap; or

(ii) if the person is a medical patient, or a person who has been rescued, and for whom compliance with subparagraph (i) is not practicable — be restrained on a stretcher in accordance with the procedures in the operator's exposition or operations manual (as applicable); or

(iii) if the person is a medical patient who is an infant for whom subparagraph (i) is considered, by the medical or nursing authority responsible for conducting the transport, to be detrimental to the infant's medical condition or the general situation inside the aircraft — be carried inside an incubator, humidicrib, or other neonatal transport unit in accordance with the applicable procedures in the operator's exposition; or

(iv) if the person is a medical patient who is an infant, or a child under the age of 6, for whom subparagraph (i) is considered by the medical or nursing authority responsible for conducting the transport to be detrimental to the infant's or child's medical condition or the general situation inside the aircraft — be carried in the arms, or on the lap, of an adult occupying a seat or a stretcher in accordance with the applicable procedures in the operator's exposition; or

(v) if the person is a person who has been rescued and for whom compliance with subparagraph (i) or (ii) is not practicable — be restrained:

(A) in a rescue harness, or other rescue device, that is compliant with the requirements of, or approved under, Part 21 of CASR; and

(B) in accordance with the applicable procedures in the operator's operations manual; or

(vi) if the person is a SOG member for whom subparagraph (i) is considered, by the police or ADF authority responsible for the conduct of the SOG operation, to be detrimental to the conduct of the operation — be otherwise safely restrained in accordance with the applicable procedures in the operator's

operations manual, taking into account the nature and characteristics of the operation;

(d) the pilot in command must be satisfied that paragraph (c) is complied with.

(3) In this section:

ADF is short for the Australian Defence Force.

rescue operation has the meaning given by subsection 1.07 (1) of the Part 138 MOS.

SOG is short for a special operations group (however described) of a State or Territory police service or the Australian Federal Police.

SOG member means an individual, other than a crew member, who is conducting activities for a SOG operation, and who is:

(a) a member of a State or Territory police service SOG or the Australian Federal Police SOG; or

(b) an ADF member acting under an arrangement between a State or Territory police service or the Australian Federal Police, and the ADF.

SOG operation means a specialist police operation that satisfies paragraphs (a), (b) and (c) as follows:

(a) it involves some or all of the following:

(i) winching operations;

(ii) rappelling operations;

(iii) emplaning or deplaning from a rotorcraft in flight or partially in flight (a ***hover entry or exit***);

(iv) emplaning or deplaning from a rotorcraft on the ground, in circumstances where a rapid entry to, or exit from, the aircraft is essential to the operation;

(b) it is 1 of the following:

(i) for, or related to, the law enforcement or counterterrorism functions of a State or Territory police service or the Australian Federal Police;

(ii) for training related to the activities and functions mentioned in paragraph (a) and subparagraph (b) (i);

(c) it is conducted at a location where a normal landing may or may not be possible or safe.

Division 20.2 Restraint of infants and children

20.02 Purpose

For paragraph 91.560 (1) (c), this Division prescribes the requirements for the restraint of an infant or a child when a direction is given to passengers under regulation 91.570 to fasten seatbelts or shoulder harnesses (as the case requires).

Note General guidance for infant and child restraints is contained in AC 91-18 *Restraint of infants and children*, as in force from time to time.

20.03 Infant and child seatbelts as restraints

(1) An infant is restrained if:

(a) the infant is carried in the arms or on the lap (the ***relevant position***) of an adult occupying a seat; and

(b) the adult's seatbelt is not fastened around the infant; and

(c) the infant is restrained in the relevant position by an effective restraining device.

Note A commonly used method of restraining an infant in a person's arms or lap is to use a supplemental loop belt, also referred to as an infant belt.

(2) A child is restrained if:

(a) the child:

(i) occupies a seat of its own; and

(ii) is restrained in the seat by the seat's seatbelt; or

(b) all of the following apply:

(i) the child occupies a seat with 1 other child who is not an infant;

(ii) both children are seated side-by-side;

(iii) the combined weight of both children is not more than 77 kg;

(iv) the seatbelt is a lap belt which, when fastened, restrains both children in the seat.

(3) Despite subsections (1) and (2), a child who is not more than 12 years old may be restrained in accordance with subsection (1) if:

(a) at the request of the pilot in command, the operator or CASA — the adult responsible for the child produces a signed and dated certificate from a registered medical practitioner stating that the child:

(i) has a serious medical condition which prevents the child from sitting upright unaided; and

(ii) is fit to travel; and

(iii) weighed less than 16 kg on the date of the certificate; and

(b) the pilot in command or operator is reasonably satisfied, on the day of the flight, that the child weighs less than 16 kg.

(4) Despite subsections (1) and (2), an infant, or a child under the age of 6, who is a medical patient described in subparagraph 20.01 (2) (c) (iv), is restrained if:

(a) the infant or child is carried in the arms or on the lap (the ***relevant position***) of an adult occupying a seat or a stretcher; and

(b) the adult's restraint (however described in the applicable procedures in the operator's exposition for subparagraph 20.01 (2) (c) (iv)) is not fastened around the infant or child; and

(c) the infant or child is restrained in the relevant position in a manner determined by the operator to be appropriate for the circumstances.

20.04 Child restraint systems that are not seatbelts

(1) In this section:

approved child restraint system means a child restraint system that meets the requirements of 1 of the following:

(a) an automotive child restraint system;

(b) an aviation child restraint system.

Note To avoid doubt, an infant sling is not a child restraint system for this Chapter.

automotive child restraint system means a child restraint system that meets the requirements of 1 of the following:

(a) AS/NZS 1754:2004 Child restraint systems for use in motor vehicles;

(b) Federal Motor Vehicle Safety Standards (FMVSS) No. 213;

(c) Canadian Motor Vehicle Safety Standard (CMVSS) No. 213;

(d) European Safety Standard requirements of ECE Regulation 44.

Note For paragraph (a), see section 1.05 for how the dating system for AS/NZS applies within this MOS.

aviation child restraint system means a child restraint system that is compliant with the requirements of, or approved under, Part 21 of CASR.

shoulder harness includes a child restraint system.

(2) An infant or a child (the ***person***) is restrained if:

(a) the person is restrained by an approved child restraint system; and

(b) the age, height and weight of the person using the system is within the range specified by the manufacturer of the system; and

(c) the system is:

(i) used according to the manufacturer's instructions; and

(ii) secured so as not to be a hazard to the person using the system or to any other person; and

(d) there is a suitable adult (the ***suitable person***) responsible for the person who is using the system.

Note Operators and pilots in command should note that in securing a child restraint system in accordance with the manufacturer's instructions, particular attention must be paid to whether the system requires securing by a lap belt, or a shoulder belt, or a combination of both. Many aircraft have only lap belts fitted to the aircraft seats but some child restraint systems are required by the manufacturer to be secured by both a lap belt and shoulder belt. In such aircraft, the system may not be able to be properly secured.

(3) The suitable person must be:

(a) seated in the seat closest to the seat on which the child restraint system is installed; and

(b) competent to do the following:

(i) install the system on a seat;

(ii) secure a person in the system;

(iii) release a person from the system.

Division 20.3 Safety briefings and instructions

20.05 Purpose

For paragraph 91.565 (1) (a), this Division prescribes the requirements for a passenger safety briefing and instructions before an aircraft takes off for a flight.

20.06 Passenger safety briefings and instructions

The passenger safety briefing and instructions must cover the following:

(a) the rules about smoking during the flight;

(b) the places on the aircraft where smoking is prohibited;

(c) when seatbelts must be worn during the flight, and how to use them;

(d) the requirement that seat backs must be in the upright position (or otherwise, if permitted by the AFM) during take-off and landing;

(e) any requirement that attachments to the seat (for example, tray tables and footrests) must be stowed during taxiing, take-off and landing;

(f) how and when to adopt the brace position;

(g) where the emergency exits are, and how to use them;

(h) the location of evacuation slides (if any) and how to use them;

(i) if emergency oxygen is carried for the flight — how and when to use the emergency oxygen;

(j) how and where to stow, or otherwise secure, carry-on baggage and personal effects, and the periods during the flight when these items must be stowed or secured;

(k) if the aircraft is fitted with escape path lighting — where the lighting is and how to use it;

(l) if survival equipment is carried, and it is intended that a passenger is to use the equipment — where the equipment is carried, and how to use it;

(m) if life jackets or life rafts are carried — where the jackets or rafts are located, and how to use them;

(n) the requirement that life jackets must not be inflated inside the aircraft;

(o) the limitations imposed on the use of portable electronic devices during different stages of the flight;

(p) the requirement that:

(i) passengers seated in emergency exit rows must be willing and able to operate the exit in the event of an emergency; and

(ii) such passengers must not have a condition that will cause them to obstruct the exit or hinder an emergency evacuation;

(q) when a passenger is carried who requires assistance — the nature of the assistance required in the event of an emergency, which emergency exit to use and when to use it;

(r) when a passenger is seated in a pilot seat — the requirement to ensure that controls are not manipulated or interfered with by the passenger;

(s) for a flight of a jump aircraft — the physical location(s) within, or on, the aircraft that the passenger must occupy during the flight in order to ensure the aircraft is operated within the aircraft's weight and balance limits during the flight.

Division 20.4 Carriage of animals

20.07 Purpose

For subregulation 91.620 (5), this Division prescribes requirements relating to the carriage of animals on an aircraft for a flight.

RESERVED

Note No requirements are currently prescribed. This section has been reserved to preserve the MOS structure for any future provisions that would be appropriate following consultation.

CHAPTER 21 RADIO FREQUENCY, BROADCAST AND REPORTING REQUIREMENTS

Division 21.1 Use of certain frequencies — radio qualifications required

21.01 Purpose

For subparagraph 91.625 (1) (a) (iv), the following kinds of radio frequencies are prescribed:

(a) the CTAF for a non-controlled aerodrome;

(b) the frequency for an MBA.

Division 21.2 Use of radio — broadcasts and reports

21.02 Purpose

For paragraph 91.630 (1) (b), this Division prescribes broadcasts and reports relating to a flight that the pilot in command of an aircraft fitted with or carrying a radio must ensure are made during the flight.

Note Regulation 91.675 (Pilot in command to report hazards to air navigation) also requires the pilot in command to make certain reports to different persons (ATS or aerodrome operators) including, for example, meteorological conditions that are hazardous to flight or defects in airways facilities or at aerodromes.

21.03 Prescribed broadcasts and reports — general

The broadcasts and reports required under this Division must be made on the relevant published radio frequency, unless the air traffic service agrees to the use of a different frequency for special flight circumstances.

Note For example, descent from controlled to uncontrolled airspace, formation flights, SAR operations, and police and security operations. The pilot in command may initiate a request for the air traffic service to agree to a changed radio frequency for special flight circumstances.

21.04 Non-controlled aerodromes — prescribed broadcasts

(1) The pilot in command of an aircraft must ensure that broadcasts on the CTAF are made for a non-controlled aerodrome in accordance with Table 21.04 (1) if:

(a) the aircraft is operating at, or in the vicinity of, a non-controlled aerodrome (including a certified or military aerodrome when non-controlled); and

(b) the aircraft is equipped with an operative VHF radio; and

(c) the pilot is qualified to use the radio.

Note 1 For the definition of ***in the vicinity of a non-controlled aerodrome*** — see section 1.07.

Note 2 For a pilot qualified to use the radio — see regulation 91.625.

Note 3 For an aircraft that must be equipped with an operative VHF radio — see Chapter 26.

Note 4 Additional requirements apply for a non-controlled aerodrome in a mandatory broadcast area — see section 21.09.

(2) For Table 21.04 (1), for an item in the Table, the pilot in command in the situation mentioned for an item in column 1 must ensure the broadcast mentioned for the item in column 2 is made.

Table 21.04 (1) – Non-controlled aerodromes – broadcasts

	Column 1	Column 2
Item	**Situation**	**Broadcast**
1	When the pilot in command considers it reasonably necessary to broadcast to avoid the risk of a collision with another aircraft	Broadcast

21.05 Controlled aerodromes and controlled airspace — prescribed reports

(1) The pilot in command of 1 of the following:

(a) an aircraft on the ground at a controlled aerodrome;

(b) an aircraft in Class A, B, C or D airspace;

(c) an IFR aircraft in Class E airspace;

must:

(d) subject to subsections (1A) and (1B), ensure that reports to the ATC service are made in accordance with Table 21.05 (1); and

(e) ensure that reports and broadcasts are made in accordance with the other applicable provisions of this Chapter.

(1A) Despite paragraph (1) (d), for item 10 of Table 21.05 (1), to ensure that separation with any aircraft operating near the base of controlled airspace is not compromised, the required report is to be made to the air traffic service for the Class G airspace volume that the aircraft will descend into after leaving controlled airspace.

(1B) Despite paragraph (1) (d), for item 5 of Table 21.05 (1), a report to correct a previously reported incorrect position estimate (a ***previous estimate***) is not required if an aircraft's position is being automatically reported by an ADS-C system, unless the previous estimate was:

(a) from a flight crew member and not the ADS-C; or

(b) due to a flight crew member initiated action.

Note An example of a flight crew member initiated action is a manually initiated speed change.

(2) For Table 21.05 (1), for an item in the Table, the pilot in command in the situation mentioned for the item in column 1 must ensure that the report mentioned for the item in column 2 is made.

Table 21.05 (1) – An aircraft at a controlled aerodrome, or in Class A, B, C or D airspace, or an IFR aircraft in Class E airspace – reports

	Column 1	Column 2
Item	**Situation**	**Report**
1	Ready to Taxi	Report the situation
2	Airborne (only at locations where an ATS surveillance service is provided)	Report the situation
3	Departure (only when item 2 does not apply)	Report the situation
4	Position report when required by the ATC service or the route reporting requirements in the authorised aeronautical information	Report the situation

	Column 1	Column 2
Item	**Situation**	**Report**
5	Previously reported position estimate is more than 2 minutes in error	Corrected position estimate
6	Sustained variation of more than 10 kts or Mach 0.02 from any previously notified speed or any standard descent profile agreed between the aircraft operator and ATS	Report the situation
7	Aircraft performance degraded below: (a) the level required for the airspace in which it is operating; or (b) the capability of the aircraft reported in the aircraft's flight notification	Report the situation
8	Leaving a level or reaching an assigned level	Report the situation
9	Unable to comply with ATC clearances or instructions	Report the situation
10	Before leaving controlled airspace on descent	Report the situation
11	Arrival	If cancelling SARWATCH — report cancellation
12	Runway braking action encountered is not as good as reported	Runway braking action via AIREP SPECIAL

Note AIP ENR 1.1, Appendix 1 includes the template for the AIREP SPECIAL, including Section 3, item 9 — runway braking action.

Note Item 7 pertains to degradation of aircraft performance as a result of failure or degradation of navigation, communications, altimetry (including RVSM airspace capability), flight control or other systems.

21.06 IFR aircraft in Class G airspace — prescribed reports

(1) The pilot in command of an IFR aircraft in Class G airspace must ensure that:

(a) reports are made to the air traffic service for the airspace in accordance with Table 21.06 (1); and

(b) reports and broadcasts are made in accordance with the other applicable provisions of this Chapter.

(2) Despite subsection (1), if the pilot in command of an IFR aircraft in Class G airspace is unable to make contact with the air traffic service in relation to the report required by item 1 or item 2 of Table 21.06 (1), the aircraft may taxi and take-off but only if:

(a) broadcasts are made in place of the required reports; and

(b) contact with the air traffic service is established as soon as possible after take-off; and

(c) the following conditions are complied with:

(i) where the operator of the flight is an AOC holder, aerial work certificate holder or Part 141 certificate holder — the pilot is assured of radio contact with the operator, or with a representative of the operator who has immediate access to a serviceable telephone, until contact is made with the air traffic service;

(ii) except for Part 121 operations conducted using aircraft with a MOPSC greater than 19 seats — a SARTIME for departure, that is a maximum of 30 minutes after commencing to taxi, has been established with the air traffic service.

(2A) Despite paragraph (1) (a), for item 5 of Table 21.06 (1), a report to correct a previously reported incorrect position estimate (a ***previous estimate***) is not required if an aircraft's position is being automatically reported by an ADS-C system, unless the previous estimate was:

(a) from a flight crew member and not the ADS-C; or

(b) due to a flight crew member initiated action.

Note An example of a flight crew member initiated action is a manually initiated speed change.

(3) For Table 21.06 (1), for an item of the Table, the pilot in command in the situation mentioned for the item of column 1 must ensure that the report mentioned for the item in column 2 is made.

Table 21.06 (1) – IFR aircraft in Class G airspace – reports

	Column 1	**Column 2**
Item	**Situation**	**Report**
1	Taxiing	Report the situation
2	Departure	Report the situation
3	Reaching cruising level	Report the situation
4	Position report when required by the ATC service or by the route reporting requirements of the authorised aeronautical information	Report the situation
5	Previously reported position estimate is more than 2 minutes in error	Report the situation
6	Before changing level	Report the situation
7	Before changing frequency	Report the situation
8	Requiring clearance into controlled airspace	Report the situation
9	Before changing to CTAF and not monitoring ATS frequency on second COM system	Report the situation
10	After landing	If cancelling SARWATCH at this time — report the cancellation

21.07 VFR aircraft in Class E or G airspace — prescribed reports

(1) The pilot in command of a VFR aircraft in Class E or G airspace must ensure that:

(a) a report is made to the air traffic service for the airspace in accordance with Table 21.07 (1); and

(b) reports and broadcasts are made in accordance with the other applicable provisions of this Chapter.

(2) For Table 21.07 (1), for an item of the Table, the pilot in command in the situation mentioned for the item in column 1 must ensure that the report mentioned for the item in column 2 is made.

Table 21.07 (1) — VFR aircraft in Classes E and G airspace

	Column 1	Column 2
Item	**Situation**	**Report**
1	Requiring clearance into controlled airspace	Report the situation
2	Before, and on completion of, over-water stage	Report in accordance with SAR reporting schedules if arranged before the over-water stage

21.08 Flights in RVSM airspace — prescribed reports

The pilot in command of an aircraft conducting a flight in RVSM airspace within an Australian FIR must ensure that a report is made of all FL deviations of 300 ft or more from the aircraft's assigned level:

(a) regardless of the cause of the deviation; and

(b) in accordance with procedures published in the authorised aeronautical information.

21.09 Flights in a mandatory broadcast area — prescribed broadcasts and reports

(1) The pilot in command of an aircraft intending to operate in an MBA must:

(a) make broadcasts and reports in accordance with:

(i) if an SFIS is not active for the MBA — Table 21.09 (1); and

(ii) if an SFIS is active for the MBA — the requirements specified in the AIP, as in force from time to time for the SFIS; and

(b) ensure that, when making a broadcast or a report required by paragraph (a), the broadcast or report contains the following information, in the following order:

(i) the name of the relevant aerodrome followed by the word TRAFFIC;

(ii) the aircraft type and callsign;

(iii) for an MBA where an SFIS is not active immediately before entering the MBA:

(A) the aircraft's present altitude (where appropriate); and

(B) the situation-based information required by Table 21.09 (1);

(iv) for an MBA where an SFIS is active immediately before to entering the MBA — the information required by the AIP for the SFIS;

(v) the name of the relevant aerodrome; and

(c) ensure that reports and broadcasts are made in accordance with the other applicable provisions of this Chapter.

Note Certain other operational requirements for MBA are contained in section 11.10A. The requirement to have a radio in an MBA is contained in section 26.18.

(2) For Table 21.09 (1), for an item of the Table, the pilot in command in the situation mentioned in column 1 of an item must ensure that the broadcast mentioned in column 2 of the same item is made.

Table 21.09 (1) – Broadcasts – in relation to a MBA

	Column 1	Column 2
Item	**Situation**	**Broadcast**
1	Before or immediately after entering an MBA	Broadcast the pilot's intended use of the MBA
2	Joining a circuit	Broadcast the situation, and indicate the leg on which the aircraft will join
3	Conducting a straight-in approach	No later than 3 NM from the runway threshold — broadcast the situation
4	Passing the final approach fix of an instrument approach procedure	Broadcast the situation
5	Commencing a missed approach	Broadcast the situation
6	After landing and clear of the active runway(s)	Broadcast the situation
7	Starting to taxi	Broadcast the situation, and the following information: (a) that the flight is to be conducted under the IFR, if that is the case; (b) for any flight, either: (i) the planned destination aerodrome for the flight; or (ii) the direction in which the pilot intends to fly from the aerodrome; or (iii) the nature of operation (e.g. circuits); (c) the runway proposed to be used for take-off.
8	Immediately before entering the runway to be used for take-off	Broadcast the following: (a) a statement that the aircraft is entering the runway; (b) the runway identifier.

CHAPTER 23 INTERCEPTION OF AIRCRAFT

23.01 Purpose

For subregulation 91.695 (1), this Chapter prescribes requirements that must be met if an aircraft (***the aircraft***) is intercepted by another aircraft during a flight.

23.02 Interception of aircraft

The pilot in command of the aircraft must comply with the applicable procedures for the pilot in command of an intercepted aircraft as set out in:

(a) ICAO Annex 2 – Appendix 1 – Signals – Section 2 – Signals for use in the event of interception; and

(b) ICAO Annex 2 – Appendix 2 – Interception of Civil Aircraft, Attachment A – Interception of Civil Aircraft.

Note For ICAO documents — see section 1.04.

CHAPTER 24 TAKE-OFF PERFORMANCE

24.01 Purpose

For subregulation 91.795 (1), this Chapter prescribes requirements relating to take-off performance for a flight of an aircraft.

24.02 Take-off performance for aeroplanes

(1) The pilot in command of an aeroplane during and after take-off must ensure that, until the aeroplane reaches the minimum height for the flight in accordance with regulation 91.265, 91.267, 91.277 or 91.305 (as applicable), the aeroplane has the performance to clear all obstacles by a safe margin.

(2) For subsection (1), the pilot in command must determine the performance of the aeroplane from any 1 of the following:

(a) the AFM;

(b) the manufacturer's data manual (if any);

(c) other data approved under Part 21 of CASR for the purpose.

(3) For subsection (2), the pilot in command must take the following into account:

(a) the take-off distance available;

(ab) the type of runway surface, and the runway surface condition, if available;

(b) the pressure altitude and temperature;

(c) the gradient of the runway in the direction of the take-off;

(d) the wind direction, speed and characteristics;

(e) the take-off and en route weather forecast;

(f) the obstacles in the vicinity of the take-off flight path.

24.03 Take-off performance for rotorcraft — general

(1) The pilot in command of a rotorcraft during and after take-off must ensure that, until the rotorcraft reaches the minimum height for the flight in accordance with regulation 91.265, 91.267, 91.277 or 91.305 (as applicable), the rotorcraft has the performance to clear all obstacles by a safe margin.

(2) For subsection (1), the pilot in command must determine the performance of the rotorcraft from any 1 of the following:

(a) the AFM;

(b) the manufacturer's data manual (if any);

(c) other data approved under Part 21 of CASR for the purpose.

(3) For subsection (2), the pilot in command must take the following into account:

(a) the take-off distance available;

(ab) the type of runway surface, and the runway surface condition, if available;

(b) the adequacy of the size of the departure and planned destination aerodromes and any alternate aerodromes;

(c) the pressure altitude and temperature;

(d) the gradient of the take-off and initial climb stage of the flight;

(e) the climb flight path;

(f) either:

(i) the wind direction, speed and characteristics — if known; or

(ii) zero wind — if the matters mentioned in subparagraph (i) are unknown;

(g) the take-off and en route weather forecast;

(h) the obstacles in the vicinity of the flight path.

24.04 Take-off performance for rotorcraft — Category A rotorcraft within populous areas

(1) This section applies to a rotorcraft that:

(a) is a Category A rotorcraft which is not being operated in accordance with its Category B supplement in the AFM (the ***rotorcraft***); and

(b) takes off from a place in a populous area that is both of the following (the ***relevant HLS***):

(i) a non-certified aerodrome (including an HLS);

(ii) an aerodrome that is not used for the regular take-off or landing of aircraft.

(2) The pilot in command of the rotorcraft may take off from the relevant HLS only if:

(a) the performance of the rotorcraft is sufficient to comply with the Category A procedure for take-off and initial climb at the relevant HLS; and

(b) in the event that an engine becomes inoperative — the pilot in command can ensure that the rotorcraft will maintain an obstacle clear climb gradient until 1 000 ft above the take-off surface.

Note 1 In the event of an engine failure, the Category A procedure allows for a rejected take-off within take-off distance available. If the critical engine failure occurs after the take-off decision point, the Category A procedure allows for flight clear of persons and property.

Note 2 ***Category A rotorcraft*** is defined in section 1.07.

24.05 Take-off performance for rotorcraft — Category B rotorcraft within populous areas

(1) This section applies to a rotorcraft that:

(a) is a Category B rotorcraft (the ***rotorcraft***); and

(b) takes off from a place in a populous area that is both of the following (the ***relevant HLS***):

(i) a non-certified aerodrome (including an HLS);

(ii) an aerodrome that is not used for the regular take-off or landing of aircraft.

(2) The pilot in command of the rotorcraft may take off from the relevant HLS only if:

(a) the performance of the rotorcraft is sufficient to:

(i) avoid obstacles during the take-off and initial climb stage of the flight; and

(ii) autorotate or fly clear of persons or property in the event of an engine failure; and

(iii) where the area is a confined area for the rotorcraft — hover out of ground effect for the take-off; and

(b) as far as practicable, the pilot in command provides for a planned take-off profile that minimises time within the avoid area of the HV curve.

Note For the ***avoid area of the HV curve*** — see section 1.07.

CHAPTER 25 LANDING PERFORMANCE

25.01 Purpose

For subregulation 91.800 (2), this Chapter prescribes requirements relating to landing performance for a flight of an aircraft.

25.02 Landing performance for aeroplanes

(1) The pilot in command of an aeroplane during approach and landing must ensure that, from the time the aeroplane descends below the minimum height for the flight in accordance with regulation 91.265, 91.267, 91.277 or 91.305 (as applicable), the aeroplane has the performance to clear all obstacles by a safe margin.

(2) For subsection (1), the pilot in command must determine the performance of the aeroplane from any 1 of the following:

(a) the AFM;

(b) the manufacturer's data manual (if any);

(c) other data approved under Part 21 of CASR for the purpose.

(3) For subsection (2), the pilot in command must take the following into account:

(a) the landing distance available;

(ab) the type of runway surface, and the runway surface condition, if available;

(b) the pressure altitude and temperature;

(c) the gradient of the runway in the direction of the landing;

(d) the wind direction, speed and characteristics;

(e) the landing weather forecast;

(f) the obstacles in the approach flight path and missed approach flight path.

25.03 Landing performance rotorcraft — general

(1) The pilot in command of a rotorcraft during approach and landing must ensure that, from the time the rotorcraft descends below the minimum height for the flight in accordance with regulation 91.265, 91.267, 91.277 or 91.305 (as applicable), the rotorcraft has the performance to clear all obstacles by a safe margin.

(2) For subsection (1), the pilot in command must determine the performance of the rotorcraft from any 1 of the following:

(a) the AFM;

(b) the manufacturer's data manual (if any);

(c) other data approved under Part 21 of CASR for the purpose.

(3) For subsection (2), the pilot in command must take the following into account:

(a) the FATO distance available;

(b) the adequacy of the size of the planned destination aerodromes and any alternate aerodromes;

(c) the pressure altitude and temperature;

(d) the gradient of the approach and any missed approach;

(e) either:

(i) the wind direction, speed and characteristics — if known; or

(ii) zero wind — if the matters mentioned in subparagraph (i) are unknown;

(f) the en route and destination weather forecast;

(g) the obstacles in the vicinity of the approach flight path and the missed approach flight path.

25.04 Landing performance for rotorcraft — Category A rotorcraft within a populous area

(1) This section applies to a rotorcraft that:

(a) is a Category A rotorcraft which is not being operated in accordance with its category B supplement in the AFM (the ***rotorcraft***); and

(b) takes off from a place in a populous area that is both of the following (the ***relevant HLS***):

(i) a non-certified aerodrome (including an HLS);

(ii) an aerodrome that is not used for the regular take-off or landing of aircraft.

(2) The pilot in command of the rotorcraft may land at the relevant HLS only if:

(a) the performance of the rotorcraft is sufficient to comply with the Category A procedure for landing and missed approach at the relevant HLS; and

(b) in the event that an engine becomes inoperative — the pilot in command can ensure that the rotorcraft will maintain an obstacle clear approach gradient, including any missed approach.

Note 1 In the event of an engine failure at or after the landing decision point, the Category A procedure allows a continued approach clear of persons and property, and a landing within the landing distance available at the HLS.

Note 2 ***Category A rotorcraft*** is defined in section 1.07.

25.05 Landing performance for rotorcraft — Category B rotorcraft within a populous area

(1) This section applies to a rotorcraft that:

(a) is a Category B rotorcraft (the ***rotorcraft***); and

(b) takes off from a place in a populous area that is both of the following (the ***relevant HLS***):

(i) a non-certified aerodrome (including an HLS);

(ii) an aerodrome that is not used for the regular take-off or landing of aircraft.

(2) The pilot in command of the rotorcraft may land at the relevant HLS only if:

(a) the performance of the rotorcraft is sufficient to:

(i) avoid obstacles during the landing and any missed approach stage of the flight; and

(ii) autorotate or fly clear of persons or property in the event of an engine failure; and

(iii) where the area is a confined area for the rotorcraft — hover out of ground effect for the landing; and

(b) as far as practicable, the pilot in command provides for a planned landing profile that minimises time within the avoid area of the HV curve.

Note For the ***avoid area of the HV curve*** — see section 1.07.

CHAPTER 26 EQUIPMENT

Division 26.1 General

26.01 Purpose

(1) For subregulation 91.810 (1), this Chapter prescribes requirements relating to:

(a) the fitment and non-fitment of equipment to an aircraft; and

(b) the carrying of equipment on an aircraft; and

(c) equipment that is fitted to, or carried on, an aircraft.

Note Requirements in relation to equipment may also be in relation to inoperative equipment.

(2) For subregulation 91.810 (1), unless the contrary intention appears in or for a particular provision, the pilot in command of an aircraft is subject to each of the requirements set out in the provisions of this Chapter.

(3) In this Chapter, unless the contrary intention appears in or for a particular provision:

(a) a reference to a pilot seeing or viewing anything from a pilot's seat is taken to mean that the thing is seen or viewed from the pilot's normal sitting position in the seat; and

(b) any mention of feet (or ft) in the context of an altitude is taken to mean feet above mean sea level (AMSL), unless otherwise stated.

Division 26.2 Approvals, visibility and inoperative equipment

26.02 Approval of aircraft equipment

(1) In this section:

relevant aircraft means any of the following:

(a) a light sport aircraft for which a special certificate of airworthiness has been issued and is in force under regulation 21.186 of CASR;

(b) a light sport aircraft for which an experimental certificate has been issued and is in force under paragraph 21.191 (j) or (k) of CASR;

(c) any other aircraft for which an experimental certificate has been issued and is in force under paragraph 21.191 (g) or (h) of CASR.

(2) Before an Australian aircraft begins a flight, any equipment that is required to be fitted to, or carried on, the aircraft under this Chapter (other than equipment required under Division 26.16) must be compliant with the requirements of, or approved under, Part 21 of CASR.

Note Division 26.16 contains requirements for mandatory or optional carriage of surveillance equipment, most of which requires TSO or ETSO authorisation. However, the Division also contains a conditional alleviation. For the relevant equipment, a requirement for Part 21 approval would inappropriately negate this conditional alleviation.

(3) Subsection (2) does not apply to the following:

(a) an item of equipment used to display the time;

(b) an independent portable light, for example, a flashlight or torch;

(c) a headset;

(d) a sea anchor and other equipment for mooring;

(e) survival equipment, including signalling equipment.

(4) Subsection (2) does not apply to a relevant aircraft in respect of any required radiocommunication system if the aircraft is fitted with a radiocommunication system

which provides the pilot with the same radiocommunication capability as would be provided if the radiocommunication system had complied with subsection (2).

(6) Before a foreign-registered aircraft begins a flight in Australian airspace, the equipment required by this Chapter to be fitted to, or carried on, the aircraft must have been approved by the NAA of the aircraft's State of registry.

(7) If equipment is carried on an aircraft although not required by this Chapter to be fitted or carried, then:

(a) the equipment need not be compliant with the requirements of, or approved under, Part 21 of CASR; and

(b) for a foreign-registered aircraft — the equipment need not have been approved by the NAA of the aircraft's State of registry; and

(c) any information, or data, provided by the equipment must not be used by any flight crew member for a flight to comply with any requirement of the civil aviation legislation in relation to communications or navigation; and

(d) the equipment, whether functional or otherwise, must not at any time affect the airworthiness of the aircraft.

Note For other requirements in relation to surveillance equipment that is not required to be fitted or carried, see section 26.69.

26.03 Visibility and accessibility of pilot-operated equipment

(1) This section applies in relation to equipment that is required under this Chapter to be fitted to, or carried on, an aircraft for a flight.

(2) Any equipment that is for a pilot's manual or visual use in, or from, the cockpit must be visible to, and usable by, the pilot from the pilot's seat in the aircraft.

(3) Emergency equipment that is required under this Chapter to be fitted to, or carried on, an aircraft for a flight must be easily accessible for immediate use in the event of an emergency.

26.04 Serviceability of equipment

Any equipment required by this Chapter to be fitted to, or carried on, an aircraft for a flight must be operative unless:

(a) another section of this Chapter provides otherwise; or

Note A minimum equipment list (a ***MEL***), approved under regulation 91.935, can only permit equipment required to be fitted to, or carried on, an aircraft by this Chapter, to be unserviceable within the limits of the requirements contained in this Chapter. For example, section 26.26 contains an allowable time period of 72 hours related to flights with inoperative altitude alerting equipment. An MEL would not be approved if it contained a maximum time period for altitude alerting equipment to be inoperative that was greater than the time period specified by either a master minimum equipment list (MMEL) or the legislation.

(b) the equipment:

(i) is inoperative because of a defect that has been approved as a permissible unserviceability for the aircraft for the flight; and

(ii) is fitted or carried in accordance with the permissible unserviceability.

Division 26.3 Flight instruments — aeroplanes

26.05 Application

This Division applies to an aeroplane, subject to Division 26.5.

26.06 Aeroplane VFR flight by day

(1) Subject to subsection (2), an aeroplane for a VFR flight by day must be fitted with equipment for measuring and displaying the following flight information:

(a) indicated airspeed;

(b) pressure altitude;

(c) magnetic heading;

(d) time;

(e) Mach number — but only for an aeroplane with operating limitations expressed in terms of Mach number;

(f) turn and slip — but only for an aeroplane conducting an aerial work operation;

(g) outside air temperature — but only for an aeroplane conducting an aerial work operation from an aerodrome at which ambient air temperature is not available from ground-based instruments.

(2) For subsection (1), the equipment for measuring and displaying the flight information mentioned in column 1 of an item in Table 26.06 (2) must meet the requirements mentioned in column 2 of the item.

Table 26.06 (2) – Requirements for equipment – aeroplane VFR flight by day

	Column 1	**Column 2**
Item	**Flight information**	**Requirements**
1	Pressure altitude	The equipment must: (a) have an adjustable datum scale calibrated in millibars or hPa; and (b) be calibrated in ft, except that, if a flight is conducted in a foreign country which measures FLs or altitudes in metres, the equipment must be calibrated in metres, or fitted with a conversion placard or device.
2	Magnetic heading	The equipment must be: (a) a direct reading magnetic compass; or (b) both: (i) a remote indicating compass; and (ii) a standby direct reading magnetic compass.
3	Time	1. The equipment must display accurate time in hours, minutes and seconds. 2. The equipment must be: (a) fitted to the aircraft; or (b) worn by, or immediately accessible to, the pilot for the duration of the flight.

26.07 Aeroplane VFR flight by night

(1) An aeroplane for a VFR flight by night must be fitted with:

(a) an approved GNSS; or

(b) an ADF or VOR.

Note 1 See subsection 1.07 (6) for definitions.

Note 2 For aircraft entering oceanic airspace with RNP 2, 4 or 10 navigation specification capability, see subsections 11.03 (1B) and (1C) in relation to long range navigation systems (LRNS) operability requirements.

(2) For subsection (1), if an approved GNSS unit is provided with the automatic barometric aiding options specified in any of the following (the ***relevant options***):

(a) (E)TSO-C129a;

(b) (E)TSO-C145a;

(c) (E)TSO-C146a;

(d) (E)TSO-C196a;

then the relevant options must be connected.

(3) Subject to subsection (4), an aeroplane for a VFR flight by night must be fitted with equipment for measuring and displaying the following flight information for the aeroplane:

(a) indicated airspeed;

(b) pressure altitude;

(c) magnetic heading;

(d) time;

(e) Mach number — but only for an aeroplane with operating limitations expressed in terms of Mach number;

(f) turn and slip;

(g) attitude;

(h) vertical speed;

(i) stabilised heading;

(j) outside air temperature;

(k) whether the supply of power to gyroscopic instruments (if any) is adequate.

(4) For subsection (3), the equipment for measuring and displaying the flight information mentioned in column 1 of an item in Table 26.07 (4) must meet the requirements mentioned in column 2 of the item.

Table 26.07 (4) – Requirements for equipment – aeroplane VFR flight by night

	Column 1	**Column 2**
Item	**Flight information**	**Requirements**
1	Indicated airspeed	The equipment must be capable of being connected to: (a) an alternate source of static pressure that: (i) is selectable by a pilot; and (ii) includes a selector that can open or block the aeroplane's static source and alternative static source at the same time; or (b) a balanced pair of flush static ports.
2	Pressure altitude	1. The equipment must: (a) have an adjustable datum scale calibrated in millibars or hPa; and

	Column 1	Column 2
Item	**Flight information**	**Requirements**
		(b) be calibrated in feet, except that, if a flight is conducted in a foreign country which measures FLs or altitudes in metres, the equipment must be: (i) calibrated in metres; or (ii) fitted with a conversion placard or device. 2. The equipment must be capable of being connected to: (a) an alternate source of static pressure that is selectable by a pilot; or (b) a balanced pair of flush static ports.
3	Magnetic heading	The equipment must be: (a) a direct reading magnetic compass; or (b) both: (i) a remote indicating compass; and (ii) 1a standby direct reading magnetic compass.
4	Time	1. The equipment must display accurate time in hours, minutes and seconds. 2. The equipment must be: (a) fitted to the aircraft; or (b) worn by, or immediately accessible to, the pilot for the duration of the flight.
5	Turn and slip	The equipment must display turn and slip information, except when a second independent source of attitude information is available in which case only the display of slip information is required.
6	Vertical speed	The equipment must be capable of being connected to: (a) an alternate source of static pressure that is selectable by a pilot; or (b) a balanced pair of flush static ports.
7	Stabilised heading	*Note* A gyromagnetic type of remote indicating compass meets this requirement if it has a primary power supply and an alternate power supply.

26.08 Aeroplane IFR flight

(1) An aeroplane for an IFR flight must be fitted with the following navigation equipment:

(a) for an aeroplane that is manufactured on or after 6 February 2014 — at least 1 approved GNSS but not one authorised in accordance with (E)TSO-C129;

Note For ***approved GNSS***, see subsection 1.07 (6).

(b) for an aeroplane that was manufactured before 6 February 2014:

(i) if the GNSS equipment is installed on or after 6 February 2014 — at least 1 approved GNSS, but not one authorised in accordance with (E)TSO-C129;

(ii) if the GNSS equipment was installed before 6 February 2014 — at least:

(A) 1 approved GNSS, but not one authorised in accordance with (E)TSO-C129; or

(B) 1 approved GNSS that is authorised in accordance with (E)TSO-C129, and an ADF or VOR.

Note For aircraft entering oceanic airspace with RNP 2, 4 or 10 navigation specification capability, see subsections 11.03 (1B) and (1C) in relation to long range navigation systems (LRNS) operability requirements.

(2) If, in accordance with subsection (1), an approved GNSS unit is provided with the automatic barometric aiding options specified in any of the following (the ***relevant options***):

(a) (E)TSO-C129a;

(b) (E)TSO-C145a;

(c) (E)TSO-C146a;

(d) (E)TSO-C196a;

then the relevant options must be connected.

(3) Subject to subsection (4), an aeroplane for an IFR flight must be fitted with equipment for measuring and displaying the following flight information:

(a) indicated airspeed;

(b) pressure altitude;

(c) magnetic heading;

(d) time;

(e) Mach number — but only for an aeroplane with operating limitations expressed in terms of Mach number;

(f) turn and slip;

(g) attitude;

(h) vertical speed;

(i) stabilised heading;

(j) outside air temperature;

(k) whether the supply of power to gyroscopic instruments (if any) is adequate.

(4) For subsection (3), the equipment for measuring and displaying the flight information mentioned in column 1 of an item in Table 26.08 (4) must meet the requirements mentioned in column 2 of the item.

Table 26.08 (4) – Requirements for equipment – aeroplane IFR flight

	Column 1	**Column 2**
Item	**Flight information**	**Requirements**
1	Indicated airspeed	1. The equipment must be capable of being connected to: (a) an alternate source of static pressure that is selectable by a pilot; or (b) a balanced pair of flush static ports.

	Column 1	Column 2
Item	**Flight information**	**Requirements**
		2. Subject to clause 3, the equipment for indicated airspeed must include a means of preventing malfunction due to condensation or icing. 3. If more than 1 unit of indicated airspeed equipment is fitted, at least 1 of the units must include a means of preventing malfunction due to condensation or icing.
2	Pressure altitude	1. The equipment must: (a) have an adjustable datum scale calibrated in millibars or hPa; and (b) be calibrated in ft, except that, if a flight is conducted in a foreign country which measures FLs or altitudes in metres, the equipment must be calibrated in metres or fitted with a conversion placard or device. 2. The equipment must be capable of being connected to: (a) an alternate source of static pressure that is selectable by a pilot; or (b) a balanced pair of flush static ports.
3	Magnetic heading	The equipment must be: (a) a direct reading magnetic compass; or (b) both: (i) a remote indicating compass; and (ii) a standby direct reading magnetic compass.
4	Time	1. The equipment must display accurate time in hours, minutes and seconds. 2. The equipment must be: (a) fitted to the aircraft; or (b) worn by, or immediately accessible to, the pilot for the duration of the flight.
5	Turn and slip	1. The equipment must display turn and slip information, except where a second independent source of attitude information is available, in which case only the display of slip information is required. 2. The equipment must have an alternate power supply in addition to its primary power supply unless: (a) the equipment has a source of power independent of the power operating other gyroscopic instruments; or (b) a second independent source of attitude information is available.

	Column 1	Column 2
Item	**Flight information**	**Requirements**
6	Attitude	The equipment must have an alternate power supply in addition to its primary power supply: (a) unless the equipment has a source of power independent of the source of turn and slip information; or (b) a second independent source of attitude information is available.
7	Vertical speed	The equipment must be capable of being connected to: (a) an alternate source of static pressure that is selectable by a pilot; or (b) a balanced pair of flush static ports.
8	Stabilised heading	The equipment must have an alternate power supply in addition to its primary power supply unless: (a) the equipment has a source of power independent of the power operating the source of turn and slip information; or (b) a second independent source of attitude information is available. *Note* A gyromagnetic type of remote indicating compass meets this requirement if it has a primary power supply and an alternate power supply.

Division 26.4 Rotorcraft-specific requirements

26.09 Application

This Division applies to a rotorcraft, subject to Division 26.5.

26.10 Rotorcraft VFR flight by day

(1) A rotorcraft for a VFR flight by day must be fitted with equipment for measuring and displaying the following flight information:

(a) indicated airspeed;

(b) pressure altitude;

(c) magnetic heading;

(d) time;

(e) slip — but only for a rotorcraft conducting an aerial work operation;

(f) outside air temperature — but only for a rotorcraft conducting an aerial work operation from an aerodrome at which ambient air temperature is not available from ground-based instruments.

(2) For subsection (1), the equipment for measuring and displaying the flight information mentioned in column 1 of an item in Table 26.10 (2), as required under subsection (1), must meet the requirements mentioned in column 2 of the item.

Table 26.10 (2) – Requirements for equipment – rotorcraft VFR flight by day

	Column 1	Column 2
Item	**Flight information**	**Requirements**
1	Pressure altitude	The equipment must: (a) have an adjustable datum scale calibrated in millibars or hPa; and (b) be calibrated in feet, except that, if a flight is conducted in a foreign country which measures FLs or altitudes in metres, the equipment must be: (i) calibrated in metres; or (ii) fitted with a conversion placard or device.
2	Magnetic heading	The equipment must be: (a) a direct reading magnetic compass; or (b) both: (i) a remote indicating compass; and (ii) a standby direct reading magnetic compass.
3	Time	1. The equipment must display accurate time in hours, minutes and seconds. 2. The equipment must be: (a) fitted to the aircraft; or (b) worn by, or immediately accessible to, the pilot for the duration of the flight.

26.11 Rotorcraft VFR flight by night

(1) A rotorcraft for a VFR flight by night must be fitted with:

(a) an approved GNSS; or

(b) an ADF or VOR.

Note 1 See subsection 1.07 (6) for definitions.

Note 2 For aircraft entering oceanic airspace with RNP 2, 4 or 10 navigation specification capability, see subsections 11.03 (1B) and (1C) in relation to long range navigation systems (LRNS) operability requirements.

(2) For subsection (1), if an approved GNSS unit is provided with the automatic barometric aiding options specified in any of the following (the ***relevant options***):

(a) (E)TSO-C129a;

(b) (E)TSO-C145a;

(c) (E)TSO-C146a;

(d) (E)TSO-C196a;

then the relevant options must be connected.

(3) Subject to subsection (5), a rotorcraft for a VFR flight by night must be fitted with equipment for measuring and displaying the following flight information:

(a) indicated airspeed;

(b) pressure altitude;

(c) magnetic heading;

(d) time;

(e) slip;

(f) attitude;

(g) standby attitude or turn indicator — but not if the rotorcraft is conducting an agricultural operation;

(h) vertical speed;

(i) stabilised heading — but not if the rotorcraft is conducting an agricultural operation;

(j) outside air temperature;

(k) whether the supply of power to gyroscopic instruments (if any) is adequate.

(4) A single pilot may only begin a rotorcraft VFR flight by night over land or water if:

(a) the rotorcraft's attitude during the flight can be maintained by the use of visual external surface cues provided by lights on the ground, or celestial illumination, or by lighting fitted to the aircraft; or

(b) the rotorcraft is fitted with an automatic pilot system, or an automatic stabilisation system.

Note Visual external surface cues can be established by using either unaided sight, or NVIS or other enhanced vision systems where permitted.

(5) For subsection (3), the equipment for measuring and displaying the flight information mentioned in column 1 of an item in Table 26.11 (5) must meet the requirements mentioned in column 2 of the item.

Table 26.11 (5) – Requirements for equipment – rotorcraft VFR flight by night

	Column 1	**Column 2**
Item	**Flight information**	**Requirements**
1	Pressure altitude	The equipment must: (a) have an adjustable datum scale calibrated in millibars or hPa; and (b) be calibrated in feet, except that, if a flight is conducted in a foreign country which measures FLs or altitudes in metres, the equipment must be: (i) calibrated in metres; or (ii) fitted with a conversion placard or device.
2	Magnetic heading	The equipment must be: (a) a direct reading magnetic compass; or (b) both: (i) a remote indicating compass; and (ii) a standby direct reading magnetic compass.
3	Time	1. The equipment must display accurate time in hours, minutes and seconds. 2. The equipment must be: (a) fitted to the aircraft; or (b) worn by, or immediately accessible to, the pilot for the duration of the flight.

	Column 1	Column 2
Item	**Flight information**	**Requirements**
4	Attitude	The equipment must have a primary power supply and an alternate power supply.
5	Standby attitude or turn	The equipment power supply must be independent of the power source for the attitude information.
6	Vertical speed	If the rotorcraft is operated onto vessels or platforms at sea by night, the equipment must: (a) be an instantaneous vertical speed indicator (***IVSI***); or (b) meet performance requirements for acceleration sensitivity equivalent to an IVSI.
7	Stabilised heading	*Note* A gyromagnetic type of remote indicating compass meets this requirement if it has a primary power supply and an alternate power supply.

26.12 Rotorcraft IFR flight

(1) A rotorcraft for an IFR flight must be fitted with the following navigation equipment:

(a) for a rotorcraft that is manufactured on or after 6 February 2014 — at least 1 approved GNSS, but not one authorised in accordance with (E)TSO-C129;

Note For ***approved GNSS***, see subsection 1.07 (6).

(b) for a rotorcraft that was manufactured before 6 February 2014:

(i) if the GNSS equipment is installed on or after 6 February 2014 — at least 1 approved GNSS, but not one authorised in accordance with (E)TSO-C129;

(ii) if the GNSS equipment was installed before 6 February 2014 — at least:

(A) 1 approved GNSS, but not one authorised in accordance with (E)TSO-C129; or

(B) 1 approved GNSS that is authorised in accordance with (E)TSO-C129, and an ADF or VOR.

Note For aircraft entering oceanic airspace with RNP 2, 4 or 10 navigation specification capability, see subsections 11.03 (1B) and (1C) in relation to long range navigation systems (LRNS) operability requirements.

(2) If, in accordance with subsection (1), an approved GNSS unit is provided with the automatic barometric aiding options specified in any of the following (the ***relevant options***):

(a) (E)TSO-C129a;

(b) (E)TSO-C145a;

(c) (E)TSO-C146a;

(d) (E)TSO-C196a;

then the relevant options must be connected.

(3) A rotorcraft for IFR flight must be fitted with an automatic pilot system or an automatic stabilisation system.

(4) A rotorcraft for IFR flight must be fitted with equipment for measuring and displaying the following flight information:

(a) indicated airspeed;

(b) pressure altitude;
(c) magnetic heading;
(d) time;
(e) slip;
(f) attitude;
(g) standby attitude;
(h) vertical speed;
(i) stabilised heading;
(j) outside air temperature;
(k) whether the supply of power to gyroscopic instruments (if any) is adequate.

(5) When a rotorcraft begins an IFR flight with only 1 pilot, as permitted by or under the civil aviation legislation or the AFM, it must be fitted with equipment for measuring and displaying pressure altitude that is separate from, and independent of, the corresponding equipment mentioned in paragraph (4) (b).

(6) When a rotorcraft begins an IFR flight with 2 pilots, as required by or under the civil aviation legislation or the AFM, it must be fitted with equipment for measuring and displaying the following, that is separate from, and independent of, the corresponding equipment mentioned in paragraphs (4) (a), (b), (e), (f) and (h):
(a) indicated airspeed;
(b) pressure altitude;
(c) slip;
(d) attitude;
(e) vertical speed.

(7) For subsections (4), (5) and (6), the equipment for measuring and displaying the flight information mentioned in column 1 of an item in Table 26.12 (7) must meet the requirements mentioned in column 2 of the item.

Table 26.12 (7) – Requirements for equipment – rotorcraft IFR flight

	Column 1	**Column 2**
Item	**Flight information**	**Requirements**
1	Indicated airspeed	1. The equipment must be capable of being connected to: (a) an alternate source of static pressure that is selectable by a pilot; or (b) a balanced pair of flush static ports. 2. Subject to clause 3, the equipment for measuring and displaying indicated airspeed must include a means of preventing malfunction due to condensation or icing. 3. If more than 1 unit of indicated airspeed equipment is fitted, at least 1 of the units must include a means of preventing malfunction due to condensation or icing. 4. The equipment must operate independently of other sources of indicated information.

	Column 1	Column 2
Item	**Flight information**	**Requirements**
2	Pressure altitude	1. The equipment must: (a) have an adjustable datum scale calibrated in millibars or hPa; and (b) be calibrated in feet, except that, if a flight is conducted in a foreign country which measures FLs or altitudes in metres, the equipment must be: (i) calibrated in metres; or (ii) fitted with a conversion placard or device. 2. The equipment must be capable of being connected to: (a) an alternate source of static pressure that is selectable by a pilot; or (b) a balanced pair of flush static ports.
3	Magnetic heading	The equipment must be: (a) a direct reading magnetic compass; or (b) both: (i) a remote indicating compass; and (ii) a standby direct reading magnetic compass.
4	Time	1. The equipment must display accurate time in hours, minutes and seconds. 2. The equipment must be: (a) fitted to the aircraft; or (b) worn by, or immediately accessible to, the pilot for the duration of the flight.
5	Attitude	1. The equipment must have a primary power supply and an alternate power supply. 2. The equipment must operate independently of other sources of turn and slip information.
6	Standby attitude	The equipment must: (a) have a source of power independent of the electrical generating system; and (b) operate independently of other sources of attitude information; and (c) continue to operate without any action by a flight crew member for a period of 30 minutes following the failure of the electrical power-generating system.

	Column 1	Column 2
Item	**Flight information**	**Requirements**
7	Vertical speed	1. The equipment must be capable of being connected to: (a) an alternate source of static pressure that is selectable by a pilot; or (b) a balanced pair of flush static ports. 2. The equipment must: (a) be an instantaneous vertical speed indicator (***IVSI***); or (b) meet performance requirements equivalent to an IVSI.
8	Stabilised heading	The equipment must have a primary power supply and an alternate power supply. *Note* A gyromagnetic type of remote indicating compass meets this requirement if it has a primary power supply and an alternate power supply.

Division 26.5 Experimental and light sport aircraft and Australian registered aircraft

26.13 Application — VFR flight requirements do not apply to certain light sport aircraft

(1) In this section:

relevant aircraft means 1 of the following:

(a) a light sport aircraft for which a special certificate of airworthiness has been issued and is in force under regulation 21.186 of CASR;

(b) a light sport aircraft for which an experimental certificate has been issued and is in force under paragraph 21.191 (j) or (k) of CASR.

(2) Sections 26.06 and 26.07 do not apply to a relevant aircraft if the aircraft is fitted with equipment which provides the pilot with the same flight and navigation information as would be provided through compliance with section 26.06 or 26.07, as the case may be.

26.14 Application — VFR and IFR flight requirements do not apply to certain experimental aeroplanes

(1) In this section:

relevant aeroplane means an aeroplane for which an experimental certificate has been issued and is in force under paragraph 21.191 (g) or (h) of CASR.

(2) Sections 26.06, 26.07 and 26.08 (other than subsection 26.08 (1)), do not apply to a relevant aeroplane if the aeroplane is fitted with equipment which provides the pilot with the same flight and navigation information as would be provided through compliance with section 26.06, 26.07 or 26.08 (other than subsection 26.08 (1)), as the case may be.

Note The effect of subsection (2) is that for IFR flight, a relevant aeroplane must be fitted with an approved GNSS in accordance with subsection 26.08 (1).

26.15 Application — VFR and IFR flight requirements do not apply to certain experimental rotorcraft

(1) In this section:

relevant rotorcraft means a rotorcraft for which an experimental certificate has been issued and is in force under paragraph 21.191 (g) or (h) of CASR.

(2) Sections 26.10, 26.11 (other than subsection (2)) and 26.12 (other than subsections (1) and (2), do not apply to a relevant rotorcraft if the rotorcraft is fitted with equipment which provides the pilot with the same flight and navigation information as would be provided through compliance with section 26.10, 26.11 (other than subsection (2)) or 26.12 (other than subsections (1) and (2)), as the case may be.

Note The effect of subsection (2) is that for a VFR flight by night over land or water that is conducted by a single pilot, a relevant rotorcraft must be fitted with an automatic pilot system or an automatic stabilisation system in accordance with subsection 26.11 (2); and that for an IFR flight, a relevant rotorcraft must be fitted with an approved GNSS in accordance with subsection 26.12 (1), and an automatic pilot system or an automatic stabilisation system in accordance with subsection 26.12 (2).

26.16 Application — VFR and IFR flight requirements do not apply to certain registered aircraft

Divisions 26.3 and 26.4 do not apply to a registered aircraft if it is fitted with equipment that the type certificating authority of a recognised country determines will achieve, for the intended operation of the aircraft, a level of safety equivalent to that which would be achieved if Division 26.3 or 26.4 (as the case requires) applied.

26.17 Electronic flight information systems

(1) This section applies to an aircraft:

(a) to which section 26.13, 26.14 or 26.15 applies; and

(b) which is fitted with 1 of the following systems:

(i) an electronic flight information system (an ***EFIS***);

(ii) an electronic display indicator;

(iii) another system for electronically displaying flight information.

(2) The system must be provided with:

(a) a battery-powered back-up; or

(b) a source of power independent of the aircraft's primary electrical system.

(3) The battery-powered back-up must:

(a) be fully charged before the flight begins; and

(b) have sufficient capacity to power the EFIS panel or other display for at least 60 minutes.

Division 26.6 Operational equipment

26.18 Radiocommunication systems

(1) Subject to subsection (2), an aircraft for a flight, in any class of airspace, whether controlled or uncontrolled, must be fitted with radiocommunication systems capable of:

(a) collectively communicating on all frequencies necessary to meet the reporting, broadcast and listening watch requirements under regulations 91.630, 91.635, 91.640 and 91.675, from any point on the route of the flight, including in the event of any diversions; and

(b) 2-way voice communications; and

(c) communicating on the aeronautical emergency frequency 121.5 MHz.

Note 1 Certain light sport aircraft and experimental aircraft do not have to comply with the requirement for this equipment to be approved under Part 21 of CASR: see subsection 26.02 (5).

Note 2 Regulation 91.400 places certain requirements on aircraft without an operative radio at certain non-controlled aerodromes.

(2) Subject to subsections (3) and (4), an aircraft for a flight under the VFR by day in Class G airspace at or below 5 000 ft AMSL (a ***relevant aircraft***) is not required to comply with subsection (1).

(3) Subsection (2) does not apply if a relevant aircraft is operating in accordance with the VMC criteria at item 4, 5 or 6 of Table 2.07 (3).

(4) Subsection (2) does not apply if a relevant aircraft is operating within, or intending to enter, an MBA.

Note Certain operational requirements for MBA are contained in section 11.10A. Radio broadcast requirements for MBA are contained in section 21.09.

26.19 When aircraft may begin a flight with inoperative radiocommunications

An aircraft for which a radiocommunication system is required may begin a flight with inoperative radiocommunication system if:

(a) the flight begins from a departure aerodrome with no facility for the radiocommunication system to be repaired or replaced; and

(b) the flight is to the nearest facility at which the radiocommunication system can be repaired or replaced; and

(c) for the portions of the flight conducted in controlled airspace:

(i) ATS is informed, before the flight begins, of the inoperative radiocommunication system; and

(ii) clearance is obtained from ATS for the flight; and

(d) for the portions of the flight conducted in Class G airspace above 5 000 ft AMSL, or conducted in an MBA:

(i) the flight is conducted during the day in VMC; and

(ii) the flight is conducted in-company with another aircraft (the ***other aircraft***); and

(iii) the other aircraft is carrying an operative radio; and

(iv) the pilot in command of the other aircraft ensures that all the broadcasts and reports required by regulation 91.630 are made for both aircraft; and

(v) the pilot in command of the other aircraft is:

(A) if the aircraft is an Australian aircraft — authorised under Part 61 of CASR to operate the radio; or

(B) if the aircraft is a foreign registered aircraft — authorised to operate the radio under the law of the aircraft's State of registry.

Note 1 For continuation of a flight with an inoperative radiocommunication system, see sections 11.10 and 11.18.

Note 2 Regulation 91.400 places certain requirements on aircraft without an operative radio at certain non-controlled aerodromes.

26.20 Equipment to measure and record cosmic radiation

(1) An aeroplane conducting an IFR flight above FL 490 must be fitted with equipment to measure and display the total cosmic radiation received in the aeroplane's cabin.

(2) For subsection (1), the equipment must continuously measure and display:

(a) the dose rate of total cosmic radiation being received during the flight; and

(b) the cumulative dose of total cosmic radiation received on each flight.

(3) In this section:

total cosmic radiation means the sum total of ionizing and neutron radiation of galactic and solar origin.

Division 26.7 Lighting systems

26.21 Cockpit and cabin lighting requirements

(1) An aircraft operating by night must be fitted with or carry, as applicable, the following lighting equipment:

(a) cockpit lighting that meets the requirements mentioned in subsection (3);

(b) cabin lighting that enables each occupant of the aircraft to see and use:

(i) the occupant's seatbelt and oxygen facilities, if any; and

(ii) the normal and emergency exits;

(c) for each flight crew member — an independent portable light accessible to the flight crew member from the flight crew member's normal seat in the aircraft;

(d) for each other crew member (if any) — an independent portable light accessible to the crew member at the crew member's crew station.

(2) An aircraft operating by day must be fitted with or carry, as applicable, cockpit lighting that meets the requirements mentioned in subsection (3) if natural light does not adequately illuminate the items of equipment and documents mentioned in paragraphs (3) (a) and (b).

(3) For paragraph (1) (a) and subsection (2), the cockpit lighting equipment of an aircraft must:

(a) illuminate each item of equipment that may be used by a flight crew member; and

(b) illuminate the documents that may be used by a flight crew member, including checklists and flight documents; and

(c) be compatible with each item of equipment that may be used by a pilot; and

(d) be arranged in a way that:

(i) enables all placards and instrument markings to be read from each pilot's normal sitting position in a pilot's seat in the aircraft; and

(ii) each pilot's eyes are shielded from direct and reflected light; and

(e) be adjustable so that the intensity of the lighting can be varied for the light conditions.

26.22 Anti-collision lights

(1) Subject to subsection (2), an aircraft operating by day or night must be fitted with the number of anti-collision lights required by the aircraft type design.

(2) The anti-collision light equipment fitted to an aircraft must comprise:

(a) at least 1 red beacon light; or

(b) at least 2 white strobe lights; or

(c) a combination of at least all of the lights mentioned in paragraphs (a) and (b).

(3) For anti-collision light equipment comprising 1 or more red beacon lights only, the lights must be displayed as follows:

(a) for a turbine-engine aircraft — from immediately before the engines are started until the time the engines are shut down at the end of the flight;

(b) for any other aircraft — from whichever of the following is the earlier, until the time the engines are shut down at the end of the flight:

(i) as required by the aircraft's flight manual instructions; or

(ii) from immediately after the engines are started.

(4) For anti-collision light equipment comprising white strobe lights only, the lights must be displayed as follows:

(a) for a turbine-engine aircraft — from immediately before the engines are started until the time the engines are shut down at the end of the flight;

(b) for any other aircraft — from whichever of the following is the earlier, until the time the engines are shut down at the end of the flight:

(i) as required by the aircraft's flight manual instructions; or

(ii) from immediately after the engines are started.

(5) For anti-collision light equipment comprising a combination of red beacon lights and white strobe lights, the lights must be displayed as follows:

(a) for the red beacon lights — in accordance with the requirements in subsection (3);

(b) for the white strobe lights — in accordance with the following:

(i) if the aircraft, on its way to the runway from which it will take off, or on its way from the runway on which it has landed, crosses any other runway that is in use for take-offs or landings (an ***active runway***) — while the aircraft is crossing the active runway;

(ii) from the time the aircraft first enters the runway from which the aircraft will take off until the time the aircraft leaves the runway on which it has landed.

(6) Subsections (3), (4) and (5) do not apply to an aircraft in an operation to the extent that:

(a) the pilot in command reasonably believes that, in the circumstances, reflection or glare from the anti-collision light system may cause a hazard to an aircraft; or

(b) a specific provision of another MOS expressly provides for occasions when particular lights need not be displayed.

Note See, for example, section 12.09 of the Part 138 MOS: display of exterior lighting in an NVIS operation that is an aerial work operation. See also section 3.08 of this MOS.

26.23 Landing lights

An aircraft operating by night must be fitted with at least 1 landing light.

26.24 Navigation lights

(1) An aircraft operating by night must be fitted with navigation lights.

(2) When required to be fitted, navigation lights must be displayed during a flight, and when operating on the movement area of an aerodrome.

(3) Subsection (2) does not apply to an aircraft in an operation to the extent that a specific provision of another MOS expressly provides for occasions when particular lights need not be displayed.

Note See, for example, section 12.09 of the Part 138 MOS: display of exterior lighting in an NVIS operation that is an aerial work operation. See also section 3.08 of this MOS.

Division 26.8 Alerting and warning system requirements

26.25 Altitude alerting system and assigned altitude indicator — IFR flights

(1) For an IFR flight, the following aircraft must be fitted with altitude alerting equipment in accordance with subsection (2):

(a) a piston-engine aircraft operating in controlled airspace above FL 150;

(b) an unpressurised turbine-engine aircraft operating in controlled airspace above FL 150;

(c) a pressurised turbine-engine aircraft operating in any controlled airspace.

(2) For subsection (1), the altitude alerting equipment must:

(a) include an assigned altitude indicator; and

(b) alert the flight crew members if the aircraft approaches a preselected altitude; and

(c) alert the flight crew members, including by an aural or visual warning, if the aircraft deviates from a preselected altitude.

(3) If an aircraft, other than an aircraft to which subsection (1) applies, is operating under the IFR in controlled airspace, the aircraft must be fitted with altitude alerting equipment that at least includes an assigned altitude indicator.

26.26 Aircraft flown with inoperative altitude alerting equipment — IFR flights

Despite section 26.25, altitude alerting equipment may be inoperative at the beginning of a flight only if the flight:

(a) begins within 72 hours of the time the equipment was found to be inoperative; and

(b) is from an aerodrome at which there is no facility for the equipment to be repaired or replaced.

26.27 Aeroplane airborne collision avoidance system — ACAS II

RESERVED

Note No requirements are currently prescribed. This section has been reserved to preserve the MOS structure for any future provisions that would be appropriate following consultation.

26.28 ACAS II requirements for use

RESERVED

Note No requirements are currently prescribed. This section has been reserved to preserve the MOS structure for any future provisions that would be appropriate following consultation.

26.29 Flight with inoperative ACAS

RESERVED

Note No requirements are currently prescribed. This section has been reserved to preserve the MOS structure for any future provisions that would be appropriate following consultation.

Division 26.9 Flight recording equipment

26.30 Definitions — flight recorders

In this Division:

combination recorder means a single recording system combining the capabilities and functions of a flight data recorder (an ***FDR***) and a cockpit voice recorder (a ***CVR***).

recorder means a combination recorder, an FDR or a CVR.

26.30A Non-application — agricultural category and restricted category aircraft

In this Division, sections 26.31 to 26.35, inclusive, do not apply to an aircraft that is type certificated in any of the following:

(a) the agricultural category;

(b) the restricted category.

26.31 Aeroplane flight data recorder

One FDR must be fitted to an aeroplane that has an MTOW of more than 5 700 kg and which:

(a) is turbine powered; or

(b) is of a type first certificated in its country of manufacture on, or after, 1 July 1965.

26.32 Aeroplane cockpit voice recorder

One CVR must be fitted to the following:

(a) an aeroplane that has an MTOW of more than 5 700 kg and which:

(i) is turbine powered; or

(ii) is of a type first certificated in its country of manufacture on, or after, 1 July 1965;

(b) a multi-engine turbine powered aeroplane that:

(i) has an MTOW of 5 700 kg or less; and

(ii) is pressurised; and

(iii) is type certificated in its country of manufacture for operation with more than 11 seats (including seats specifically designed for the use of crew members); and

(iv) was first issued with a certificate of airworthiness after 1 January 1988.

26.33 Rotorcraft flight data recorder

One FDR must be fitted to a rotorcraft that has an MTOW of more than 5 700 kg and which:

(a) is turbine powered; or

(b) is of a type first certificated in its country of manufacture on, or after, 1 July 1965.

26.34 Rotorcraft cockpit voice recorder

One CVR must be fitted to the following:

(a) a rotorcraft that has an MTOW of more than 5 700 kg and which:

(i) is turbine powered; or

(ii) is of a type first certificated in its country of manufacture on, or after, 1 July 1965;

(b) a multi-engine turbine powered rotorcraft that:

(i) has an MTOW of 5 700 kg or less; and

(ii) is pressurised; and

(iii) is type certificated in its country of manufacture for operation with more than 11 seats (including seats specifically designed for the use of crew members); and

(iv) was first issued with a certificate of airworthiness after 1 January 1988.

26.35 Combination recorders — for aeroplane or rotorcraft

(1) If the combined effect of sections 26.31 and 26.32 for an aeroplane is that the aeroplane must be fitted with both 1 FDR and 1 CVR, the requirements may be met by the fitment of:

(a) 2 combination recorders; or

(b) 1 FDR and 1 combination recorder; or

(c) 1 CVR and 1 combination recorder.

(2) If the combined effect of sections 26.33 and 26.34 for a rotorcraft is that the rotorcraft must be fitted with both 1 FDR and 1 CVR, the requirements may be met by the fitment of:

(a) 1 combination recorder; or

(b) 1 FDR and 1 combination recorder; or

(c) 1 CVR and 1 combination recorder.

26.36 FDR, CVR and combination recorder technical requirements

(1) An FDR or a combination recorder must comply with 1 of the following:

(a) the requirements of CAO 103.19;

(b) (E)TSO-C124a.

Note These standards include the minimum recording time requirements.

(2) A CVR or a combination recorder must comply with 1 of the following:

(a) the requirements of CAO 103.20;

(b) (E)TSO-C123a.

Note These standards include the minimum recording time requirements.

(3) The operator of an aircraft that must ensure that:

(a) for an aircraft required to be equipped with an FDR or a combination recorder:

(i) the recorder retains its last 25 hours of flight data recording; and

(ii) data are preserved from the last 2 occasions on which flight data recording was calibrated; and

(b) for an aircraft required to be equipped with an a CVR or a combination recorder — the recorder retains its last 30 minutes of cockpit voice recording.

Note The purpose of subparagraph (a) (ii) is to enable determination of the accuracy of recorded data.

26.37 Use of FDR, CVR and combination recorders

(1) Subject to subsection (4), an FDR fitted to an aircraft under this Division must record continuously from the time when the aircraft first begins moving under its own power for a flight until the time the flight is terminated and the aircraft can no longer move under its own power.

(2) Subject to subsection (4), a CVR fitted to an aircraft under this Division must:

(a) start to record before the aircraft first begins moving under its own power for a flight; and

(b) as far as practicable if electrical power is available — start to record as early as possible during the cockpit checks before the engines are started at the beginning of a flight; and

(c) record continuously until the termination of the flight when the aircraft is no longer capable of moving under its own power and the engines have been shut down; and

(d) as far as practicable if electrical power is available — continue recording until as close as possible to the conclusion of the cockpit checks immediately following engine shutdown at the end of the flight.

(3) The FDR and the CVR within a combination recorder fitted to an aircraft under this Division must record continuously during the same periods as an FDR and a CVR are required to operate under subsections (1) and (2).

(4) If:

(a) there is no APU or other alternative power source for the aircraft; and

(b) it is reasonably necessary to preserve the aircraft's primary power source in order to start the aircraft's engines; and

(c) the FDR is operated continuously during the period beginning just before the engines are started for take-off and ending when the final pilot checklist is completed at the end of the flight;

then, a CVR fitted to an aircraft under this Division must record continuously during the period:

(d) beginning after the engines are started for the flight; and

(e) ending when the final pilot checklist is completed at the end of the flight.

(5) An FDR or combination recorder fitted to an aircraft under this Division must not be operated during maintenance of the aircraft or of an aeronautical product fitted to the aircraft, except if the maintenance is to the recorder or an aircraft engine.

(6) For subsection (5), an APU fitted to the aircraft is not an aircraft engine unless it is capable of propelling the aircraft.

26.38 Flight with inoperative FDR, CVR or combination flight recording equipment

An FDR, a CVR, or a combination recorder fitted to an aircraft under this Division may be inoperative at the beginning of a flight only if:

(a) the flight begins from a departure aerodrome with no facility for the recorder to be repaired or replaced; and

(b) for an aircraft that is only required to be fitted with 1 CVR or 1 FDR — the inoperative recorder has not been inoperative for more than 21 days; and

(c) for an aircraft that is required to be fitted with 1 CVR and 1 FDR:

(i) the inoperative recorder has not been inoperative for more than 21 days; and

(ii) the other recorder is operative; and

(d) for an aircraft that is fitted with 1 combination recorder — the inoperative recorder has not have been inoperative for more than 3 days; and

(e) for an aircraft that is fitted with more than 1 combination recorders:

(i) the inoperative combination recorder has not been inoperative for more than 21 days; and

(ii) the other combination recorder is operative.

26.39 Data link recorder

RESERVED

Note No requirements are currently prescribed. This section has been reserved to preserve the MOS structure for any future provisions that would be appropriate following consultation.

Division 26.10 Aircraft interior communication systems

26.40 Flight crew intercommunications system — VFR flights

(1) This section applies to an aircraft (a ***relevant aircraft***):

(a) that is flown under the VFR; and

(b) whose flight is required by or under the civil aviation legislation or the aircraft's AFM to be conducted by at least 2 pilots; and

(c) whose cockpit noise levels at any stage of the flight prevent the pilots from communicating with each other in speech at the level of normal conversation.

(2) A relevant aircraft must be fitted with a flight crew intercommunications system which, for each flight crew member, includes a headset and microphone that are not of the hand-held type.

26.41 Flight crew intercommunications system — IFR flights

(1) This section applies to an aircraft (a ***relevant aircraft***) that is flown under the IFR.

(2) When a relevant aircraft begins a flight with 1 pilot, as permitted by or under the civil aviation legislation or the AFM, it must be fitted with or carry:

(a) 2 headsets and microphones that are not of a hand-held type; or

(b) 1 headset and microphone that is not of a hand-held type, and 1 hand-held microphone with a loudspeaker.

(3) When a relevant aircraft begins a flight with at least 2 pilots, as required by or under the civil aviation legislation or the AFM, it must be fitted with:

(a) 3 headsets and 3 microphones that are not of a hand-held type; or

(b) 2 headsets and microphones that are not of a hand-held type, and 1 hand-held microphone with a loudspeaker.

26.42 Public-address system

(1) This section applies to an aircraft (a ***relevant aircraft***) that has:

(a) a maximum operational passenger seating configuration of 20 or more; and

(b) at least 1 passenger on board for a flight.

(2) When a relevant aircraft begins a flight, it must be fitted with a public-address system to enable the pilot in command to address the passengers.

Division 26.11 Oxygen equipment and oxygen supplies

26.43 Supplemental oxygen

(1) An aircraft must carry sufficient supplemental oxygen to meet the requirements set out in Table 26.43 (2).

(2) An aircraft to which subsection (1) applies must be fitted with, or carry, supplemental oxygen equipment capable of storing and dispensing the supplemental oxygen to crew members and passengers.

(3) For a person mentioned in column 1 of an item in Table 26.43 (2), supplemental oxygen must be made available through an oxygen dispensing unit (a dispensing unit) in accordance with the supply requirements mentioned for the item in column 2.

(4) Each flight crew member must use the supplemental oxygen that is made available to each of them in accordance with the supply requirements mentioned in column 2 of item 1 of Table 26.43 (2).

Table 26.43 (2) – Supplemental oxygen requirements

	Column 1	**Column 2**
Item	**Person**	**Supplemental oxygen supply requirements**
1	Flight crew member or cabin crew member	(a) For any period exceeding 30 minutes when the cabin pressure altitude is continuously at least FL 125 but less than FL 140, there must be supply for the entire period. (b) For any period when the cabin pressure altitude is at least FL 140, there must be supply for the entire period. (c) Without otherwise affecting paragraphs (a) and (b), when a pressurised aircraft is flown at an altitude of FL 250 or more (***relevant flight***), there must be at least 10 minutes supply even if the entire period of relevant flight is less than 10 minutes.
2	Passenger	(a) For any period when the cabin pressure altitude is at least FL 150, there must be supply for the entire period. (b) Without otherwise affecting paragraph (a), when a pressurised aircraft is flown at an altitude of FL 250 or more (***relevant flight***), there must be at least 10 minutes supply after descending below FL 250 even if the entire period of relevant flight is less than 10 minutes.

26.44 Oxygen mask usage requirements — pressurised aircraft above FL 250

(1) In this section:

quick-donning mask means an oxygen mask that:

(a) is for a flight crew member's personal use; and

(b) within 5 seconds of it being deployed and ready for use, the flight crew member can, with 1 hand, place over the face, secure and seal.

(2) This section applies for a flight of a pressurised aircraft that is flown above FL 250 at any time during the flight.

(3) At least 1 pilot occupying a pilot seat must:

(a) be wearing a sealed oxygen mask (securely worn) that:

(i) is being supplied with supplemental oxygen; or

(ii) automatically supplies supplemental oxygen when the cabin pressure altitude is at or above FL 140; or

(b) have access to a quick-donning mask that is supplied with supplemental oxygen when the mask is donned.

(4) During the period when the aircraft is flown above FL 450, at least 1 pilot occupying a pilot seat must be wearing 1 of the following that is being supplied with supplemental oxygen:

(a) a sealed oxygen mask (securely worn); or

(b) a quick-donning mask.

26.45 Protective breathing equipment — flight crew members

(1) When a pressurised aircraft begins a flight with at least 2 pilots, as required by or under the civil aviation legislation or the AFM, it must be carrying protective breathing equipment (***PBE***) for each flight crew member in accordance with this section.

(2) The PBE must:

(a) protect the wearer's eyes, nose and mouth; and

(b) the part protecting the wearer's eyes:

(i) must not adversely affect vision in any noticeable way; and

(ii) must allow corrective glasses to be worn in a normal position; and

(b) be able to supply oxygen continuously for at least 15 minutes.

Note The oxygen supply for the PBE for each flight crew member can be provided by the supplemental oxygen required under section 26.43.

(3) The PBE for a flight crew member must be accessible for immediate use at the flight crew member's crew station.

(4) The PBE must not prevent, or be likely to prevent, a flight crew member from effectively using any crew intercommunications or radiocommunications equipment fitted to or carried on the aircraft.

26.46 Portable protective breathing equipment

(1) When a pressurised aircraft begins a flight with at least 2 pilots, as required by or under the civil aviation legislation or the AFM, it must be carrying portable protective breathing equipment (***portable PBE units***) for each flight crew member in accordance with this section.

(2) Each portable PBE unit must:

(a) protect the wearer's eyes, nose and mouth; and

(b) the part protecting the wearer's eyes:

(i) must not adversely affect vision in any noticeable way; and

(ii) must allow corrective glasses to be worn in a normal position; and

(b) be able to supply oxygen, or a mixture of oxygen and another suitable gas, continuously for at least 15 minutes.

(3) Portable PBE units must be located as follows:

(a) for a flight where no crew members other than the minimum flight crew members are carried — 1 portable PBE unit must be located in, or as close as practicable to, the flight crew compartment;

(b) as far as practicable — 1 portable PBE unit must be located adjacent to each of the hand-held fire extinguishers required to be carried on a flight under Division 26.13;

(c) if compliance with paragraph (b) is not practicable — 1 portable PBE unit must be located adjacent to each individual cabin crew member crew station that is being used by a cabin crew member for the flight.

(4) Portable PBE units must not prevent, or be likely to prevent, a crew member from effectively using any crew intercommunications or radiocommunications equipment fitted to or carried on the aircraft.

26.47 First aid oxygen equipment — pressurised aircraft

(1) In this section:

BTPD means body temperature and pressure dry.

BTPS means body temperature and pressure saturated.

first aid oxygen means a supply of undiluted oxygen for any passengers who, for physiological reasons, may still require oxygen when:

(a) there has been a cabin depressurisation; and

(b) the amounts of supplemental oxygen supply otherwise required under this Division have been exhausted.

standard temperature and pressure means 0 degrees Celsius at a pressure of 760 mm Hg.

STPD means standard temperature and pressure dry.

(2) This section applies to a pressurised aircraft (a ***relevant aircraft***) that:

(a) begins a flight with at least 2 pilots as required by or under the civil aviation legislation or the AFM; and

(b) is flown above FL 250 at any stage during the flight; and

(c) has at least 1 passenger on board for the flight.

(3) Until immediately before 2 December 2023, a relevant aircraft must comply with the requirements related to first aid oxygen (however described) in accordance with:

(a) CAO 20.4 and CAO 108.26, as in force immediately before the commencement of this instrument; or

(b) this section.

(4) With effect from the beginning of 2 December 2023, a relevant aircraft must be fitted with or carry first aid oxygen in accordance with this section.

(5) When the aircraft begins the flight, it must carry, for use in first aid, such a volume of first aid oxygen as will provide an average oxygen gas flow rate, calculated assuming dry oxygen gas at standard temperature and pressure, of 3 litres per minute per person:

(a) for whichever of the following is the greater number of persons:

(i) 2% of the number of passengers carried on the flight;

(ii) 1 passenger; and

(b) for the flight period after a cabin depressurisation event during which the aircraft's cabin pressure altitude is above 8 000 ft but is not above FL 150.

(6) When the aircraft begins the flight, it must carry, for use in dispensing first aid oxygen, a sufficient number of first aid oxygen dispensing units relative to the number of passengers on board, but in no case less than 2 such units.

(7) An oxygen dispensing unit:

(a) must be capable of generating a flow rate, calculated assuming dry oxygen gas at standard temperature and pressure, of at least 4 litres per minute per person STPD; and

(b) may have a means of reducing the flow to not less than 2 litres per minute per person STPD at any altitude.

Division 26.12 Emergency locator transmitters

26.48 Carriage of ELTs

(1) When an aircraft begins a flight, it must comply with the following requirements:

(a) for a flight other than one mentioned in paragraph (b) — the flight must:

(i) be fitted with an automatic ELT; or

(ii) carry at least 1 survival ELT;

(b) for a flight where more than 1 life raft is carried to comply with the requirements of section 26.60 — the flight must:

(i) be fitted with an automatic ELT and carry a survival ELT; or

(ii) carry at least 2 survival ELTs.

(2) Despite paragraph (1) (a), but without affecting paragraph (1) (b), when a single-engine aircraft is flown further over water than the distance from which, with the engine inoperative, the aircraft could reach an area of land that is suitable for a forced landing — the aircraft must carry a survival ELT.

(3) Without affecting paragraph (1) (b) (but subject to subsection (4)), paragraph (1) (a) does not apply to:

(a) a single-seat aircraft; or

(b) an aircraft in a flight for a purpose related to any of the following:

(i) the aircraft's manufacture;

(ii) the preparation or delivery of the aircraft following its purchase or transfer of operator;

(iii) the positioning of an Australian aircraft from a location outside Australia to any place at which any ELTs required to be fitted to the aircraft by this Division will be registered with AMSA; or

(c) an aircraft flown no more than 50 NM from its place of departure.

(3A) Without affecting paragraph (1) (b) (but subject to subsection (4)), subsection (2) does not apply to a single-engine aircraft if:

(a) the aircraft is a single-seat aircraft; or

(b) the aircraft flight is for a purpose related to any of the following:

(i) the aircraft's manufacture;

(ii) the preparation or delivery of the aircraft following its purchase or transfer of operator;

(iii) the positioning of an Australian aircraft from a location outside Australia to any place at which any ELTs required to be fitted to the aircraft by this Division will be registered with AMSA; or

(b) the aircraft is:

(i) fitted with an operative radio capable, in the event of an emergency, of alerting an appropriate person in relation to the emergency; or

(ii) otherwise capable of continuous communication with a person on the ground during the aircraft's flight.

(4) For paragraph (1) (b), an automatic ELT or a survival ELT that is fitted or carried need not meet the requirements of paragraph 26.49 (b) or (c) (as applicable), if the flight is for a purpose related to any of the following:

(a) the aircraft's manufacture; or

(b) the preparation or delivery of the aircraft following its purchase or transfer of operator; or

(c) the positioning of an Australian aircraft from a location outside Australia to any place at which any ELTs required to be fitted to the aircraft by this Division will be registered with AMSA.

(5) For subsection (1), if the ELT carried is an automatic ELT that has a switch marked with the word "armed" (or with a similar word) — then the pilot in command must ensure that the switch is set to the armed position at the time the flight begins.

(6) For subsections (1) and (2), if the ELT carried is a survival ELT — then the pilot in command must ensure that the ELT is carried in 1 of the following locations on the aircraft:

(a) on the person of a crew member; or

(b) in, or adjacent to, a life raft; or

(c) adjacent to an emergency exit used for evacuation of the aircraft in an emergency.

26.49 ELT — basic technical requirements

In this Division, an ELT is a transmitter that meets the following requirements (***basic technical requirements***):

(a) if the transmitter is activated — the transmitter must transmit simultaneously on 121.5 MHz and 406 MHz;

(b) if the transmitter is fitted to, or carried on, an Australian aircraft — the transmitter must be registered with the Australian Maritime Safety Authority (***AMSA***) and with no other authority;

(c) if the transmitter is fitted to, or carried on, a foreign-registered aircraft — the transmitter must be registered with the authority of the aircraft's State of registry that is responsible for SAR services, and not with AMSA;

(d) the transmitter must, for identification purposes, be coded in accordance with the requirements for the transmitter in Appendix 1 to Chapter 5 of Part II, Voice Communications, in Volume III of ICAO Annex 10, *Aeronautical Telecommunications*;

(e) if the transmitter is fitted with a lithium-sulphur dioxide battery — the battery must be authorised by the FAA or EASA in accordance with (E)TSO-C142a.

26.50 Automatic ELT

(1) In this Division:

automatic ELT is an ELT that meets the requirements in:

(a) section 26.49; and

(b) subsection (2).

(2) For paragraph (b), the ELT:

(a) must be automatically activated on impact; and

(b) must be 1 of the following types:

(i) a type authorised by the FAA or EASA in accordance with (E)TSO-C126;

(ii) a type authorised by EASA in accordance with:

(A) ETSO-2C91a for operation on 121.5 MHz; and

(B) ETSO-2C126 for operation on 406 MHz;

(iii) a type approved under Part 21 of CASR as having a level of performance equivalent to a type of transmitter mentioned in subparagraph (i) or (ii).

26.51 Survival ELT

(1) In this Division:

survival ELT is an ELT that meets the requirements in:

(a) section 26.49; and

(b) subsection (2).

(2) For paragraph (1) (b), the ELT must be:

(a) removable from the aircraft; and

(b) 1 of the following types:

(i) an emergency position-indicating radio beacon of a type that meets the requirements of AS/NZS 4280.1:2003;

(ii) a personal locator beacon of a type that meets the requirements of AS/NZS 4280.2:2003;

(iii) a type authorised by the FAA or EASA in accordance with (E)TSO-C126;

(iv) a type authorised by EASA in accordance with:

(A) ETSO-2C91a for operation on 121.5 MHz; and

(B) ETSO-2C126 for operation on 406 MHz;

(v) a type approved under Part 21 of CASR as having a level of performance equivalent to a type mentioned in subparagraph (i), (ii), (iii) or (iv).

26.52 Aircraft flown with inoperative ELT

(1) This section only applies to an aircraft:

(a) required to fit, or carry, an ELT under paragraph 26.48 (1) (a); and

(b) that is not required to carry a life raft under section 26.60.

(2) The aircraft may begin a flight with an inoperative automatic ELT, or an inoperative survival ELT, if the flight is for the purpose of taking the aircraft to a place for the maintenance or repair of the ELT.

(3) The aircraft may begin a flight without an automatic ELT or a survival ELT if:

(a) the ELT has been temporarily removed from the aircraft for maintenance; and

(b) an entry has been made in the aircraft's flight technical log, stating:

(i) the ELT's make, model and serial number; and

(ii) the date on which the ELT was removed from the aircraft; and

(iii) the reason for the removal of the ELT; and

(c) a placard stating "Emergency locator transmitter not installed or carried" has been placed in the aircraft in a position where it can be seen by the pilot in command; and

(d) a period of no more than 90 days has passed since the ELT was temporarily removed from the aircraft for the maintenance mentioned in paragraph (a).

(4) Despite paragraph 26.48 (1) (a), if an inoperative automatic ELT has been removed from an aircraft, the aircraft is not required to carry a survival ELT during the period that the inoperative ELT is permitted to be inoperative under this section.

(5) Despite paragraph 26.48 (1) (a), if an inoperative survival ELT has been removed from an aircraft, the aircraft is not required to be fitted with an automatic ELT during the period that the inoperative ELT is permitted to be inoperative under this section.

Division 26.13 Portable emergency equipment

26.53 Hand-held fire extinguishers — aeroplanes

(1) In this section:

Class A cargo or baggage compartment has the meaning given by FAR 25.857, as in force from time to time.

Class B cargo or baggage compartment has the meaning given by FAR 25.857, as in force from time to time.

Class E cargo compartment has the meaning given by FAR 25.857, as in force from time to time.

(2) This section applies to an aeroplane with an MTOW above 5 700 kg.

(3) The aeroplane must carry at least the following number of hand-held fire extinguishers in the locations mentioned:

(a) 1 in the flight crew compartment;

(b) 1 in each galley or 1 readily accessible for use in each galley, being a galley that is not in a passenger, crew or cargo compartment;

(c) 1 that is accessible to the crew members, and that is conveniently located for use in relation to each of the following:

(i) a class A cargo or baggage compartment;

(ii) a class B cargo or baggage compartment;

(iii) a class E cargo or baggage compartment;

(d) for an aircraft with the maximum certificated passenger seating capacity mentioned in an item of column 1 of Table 26.53 (3) (d) — the number mentioned in column 2 for the item, conveniently located to provide adequate availability for use in each passenger compartment;

Table 26.53 (3) (d) — Requirements for number of hand-held fire extinguishers

	Column 1	Column 2
Item	**Maximum certificated passenger seating capacity**	**Number of extinguishers**
1	7-30	1
2	31-60	2
3	61-200	3
4	201-300	4
5	301-400	5
6	401-500	6
7	501-600	7
8	601 or more	8

(e) despite paragraphs (a) and (d) — for an aeroplane with a maximum certificated passenger seating capacity of not more than 9, in which the flight crew members and the passengers occupy the same compartment — 1, readily available to the pilot in command;

(f) despite paragraphs (a) and (d) — for an aeroplane with a maximum certificated passenger seating capacity of more than 9, in which the flight crew members and the passengers occupy the same compartment:

(i) 1, readily available to the pilot in command; and

(ii) 1, readily available to the passengers.

26.54 Hand-held fire extinguishers — rotorcraft

(1) This section applies to a rotorcraft that is type certificated in the transport category.

(2) The rotorcraft must carry at least the following number of hand-held fire extinguishers:

(a) 1 in the flight crew compartment;

(b) for a rotorcraft that has a maximum certificated passenger seating capacity of 7 or more — 1 in the passenger compartment;

(c) despite paragraph (b) — for a rotorcraft with a maximum certificated passenger seating capacity of not more than 9, in which the flight crew members and the passengers occupy the same compartment — 1, readily available to the pilot in command;

(d) despite paragraph (b) — for a rotorcraft with a maximum certificated passenger seating capacity of more than 9, in which the flight crew members and the passengers occupy the same compartment:

(i) 1, readily available to the pilot in command; and

(ii) 1, readily available to the passengers.

Division 26.14 Equipment for flights over water

26.55 Sea anchors etc. and sound signals — seaplanes, amphibians and certain rotorcraft

(1) This section applies to a flight of an aircraft if:

(a) the aircraft is a seaplane, an amphibian, or a rotorcraft designed to take off from, and land on, water or land; and

(b) the flight involves take-off from, or landing on, water.

(2) When the aircraft begins the flight, it must carry the following:

(a) a sea anchor;

(b) other equipment for mooring.

(3) If the flight is conducted on or over water to which the International Regulations apply, the aircraft must carry equipment for making the sound signals required by the International Regulations for the flight.

Note The expression ***International Regulations*** is defined in the CASR Dictionary.

26.56 Life jackets — carriage requirements

(1) This section applies to an aircraft flight:

(a) if the aircraft is a seaplane or an amphibian; or

(b) for a single-engine aircraft that is not a seaplane or an amphibian — if, during the flight, the aircraft is flown further over water than the distance from which, with the engine inoperative, the aircraft could reach an area of land that is suitable for a forced landing; or

(c) for a multi-engine aircraft that is not a seaplane or an amphibian — if during the flight the aircraft is flown more than 50 NM from an area of land that is suitable for a forced landing.

(2) When the aircraft begins the flight, it must carry the following:

(a) for each infant on board — a life jacket, or another equally effective flotation device, that may have a whistle;

(b) for each other person on board — a life jacket that must have a whistle.

(3) This section does not apply if:

(a) the aircraft is flown over water for the purpose of climbing after take-off from, or descending to land at, an aerodrome; and

(b) the aircraft is flown in accordance with a navigational procedure that is normal for the climb or descent at the aerodrome.

26.57 Stowage of life jackets

(1) This section applies to an aircraft that is required to carry a life jacket or a flotation device under this Division.

(2) When the aircraft begins the flight, then, unless the life jacket or flotation device is being worn:

(a) each infant's life jacket or flotation device must be stowed where it is readily accessible by an adult responsible for the infant, in the event of an emergency evacuation; and

(b) each other person's life jacket must be stowed where it is readily accessible from the person's seat in the event of an emergency evacuation.

26.58 Wearing life jackets — aircraft generally

(1) Subject to section 26.59, a person (other than an infant) on board a single-engine aircraft must wear a life jacket if the flight is over water that is further than the distance from which, with the engine inoperative, the aircraft could reach land.

(2) A person (other than an infant) on board a rotorcraft must wear a life jacket if the flight is over water to or from a helideck.

(3) This section does not apply if:

(a) for any aircraft:

(i) the aircraft is flown over water for the purpose of climbing after take-off from, or descending to land at, an aerodrome; and

(ii) the aircraft is flown in accordance with a navigational procedure that is normal for the climb or descent at the aerodrome; or

(b) for any aeroplane — the aeroplane is being flown higher than 2 000 ft above the water.

(4) For subsections (1) and (2), a person may be taken to be wearing a life jacket if it is secured to the person in a way that allows the person to quickly and easily put it on in an emergency.

26.59 Wearing life jackets – rotorcraft – special provision

(1) This section applies to a flight of a rotorcraft if:

(a) the rotorcraft takes off from, or lands at, an aerodrome in a populous area; and

(b) an area of water is the only reasonably available forced-landing area for the ***relevant period***.

(2) During the relevant period, each person on the rotorcraft (other than an infant, if any) must wear a life jacket.

(3) For paragraph (1) (b), the ***relevant period*** is:

(a) for a take-off — the period after take-off until the rotorcraft reaches the minimum height at or above which the rotorcraft is required to be flown under regulation 91.265; or

(b) for a landing — the period after the rotorcraft descends below the minimum height at or above which the rotorcraft is required to be flown under regulation 91.265, until the rotorcraft has landed.

26.60 Life rafts —carriage requirements

(1) When an aircraft begins a flight to which this section applies, it must carry sufficient life rafts to provide a place on a life raft for each person on the aircraft.

(2) This section applies to an aircraft flight if during the flight the aircraft is flown further over water than the following distances:

(a) for a jet-driven multi-engine aeroplane with an MTOW of more than 2 722 kg — whichever is the shorter of the following:

(i) the distance the aeroplane would fly in 2 hours at its normal cruising speed in still air;

(ii) 400 NM;

(b) for a turbine-engine propeller-driven aeroplane with an MTOW of more than 5 700 kg — whichever is the shorter of the following:

(i) the distance the aeroplane would fly in 2 hours at its normal cruising speed in still air;

(ii) 400 NM;

(c) for any other aircraft — whichever is the shorter of the following:

(i) the distance the aircraft would fly in 30 minutes at its normal cruising speed in still air;

(ii) 100 NM.

(3) For subsection (1), when working out the number of life rafts to be carried on an aircraft:

(a) the capacity of a life raft is the rated capacity specified for it by the manufacturer of the life raft; and

(b) the number of infants on board the aircraft need not be taken into account.

(4) Any overload capacity of a life raft is not to be taken into account in determining its capacity for the purposes of paragraph (3) (a).

26.61 Stowage of life rafts

(1) This section applies to an aircraft that is required to carry a life raft under this Division.

(2) The life raft must be stowed and secured so that it can be readily deployed if the aircraft has to ditch.

(3) If a life raft is stowed in a compartment or container, the compartment or container must be conspicuously marked as containing the life raft.

26.62 Overwater survival equipment

(1) This section applies if an aircraft is required to carry a life raft under section 26.60.

(2) When the aircraft begins the flight, it must carry the following:

(a) survival equipment for sustaining life, as appropriate for the overwater area to be overflown;

(b) signalling equipment that can make the distress signals set out in Appendix 1 to ICAO Annex 2, *Rules of the Air* if required.

Division 26.15 Remote areas

26.63 Definitions

In this Division:

Central Australia remote area has the meaning given by section 26.65.

remote area means 1 of the following:

(a) Central Australia remote area;

(b) Snowy Mountains remote area;

(c) Tasmania remote area.

Snowy Mountains remote area has the meaning given by section 26.65.

Tasmania remote area has the meaning given by section 26.65.

Note The actual definitions are located in section 26.65, adjacent to supporting maps.

26.64 Remote area survival equipment

(1) This section applies to the flight of an aircraft over a remote area.

(2) When the aircraft begins the flight, it must carry survival equipment for sustaining life, as appropriate for the remote area to be overflown.

26.65 Meaning of remote area

(1) ***Central Australia remote area*** means the area of Australia, illustrated by the shading in Figure 26.65-1 Central Australia remote area, that:

(a) is enclosed within the boundary of the following lines: a line from Kalgoorlie to Leigh Creek, to Bourke, to Mt Isa, to Townsville, to Cairns, then following the coast north to Cape Horn, then along the coastline of the Gulf of Carpentaria and on to Darwin, then following the coastline to Anna Plains, then to Wiluna, to Laverton, and back to Kalgoorlie; and

(b) includes Australian-administered islands adjacent to the remote area between Cairns and Anna Plains; and

(c) excludes the area within a 50 NM radius of Darwin; and

(d) excludes the flight corridors within sight of, and not more than 5 NM from the following:

(i) the Stuart highway between Alice Springs and Darwin;

(ii) the Barkly highway between Tenant Creek and Mt Isa;

(iii) the Bruce Highway between Townsville and Cairns.

Snowy Mountains remote area means the area of Australia, illustrated by the shading in Figure 26.65-2 Snowy Mountains remote area, that is enclosed within the boundary of the following lines: a line from Mt Franklin to Tharwa, to Berridale, to Delegate, to Mt Baw, to Jamieson, to Khancoban, and back to Mt Franklin.

Tasmania remote area means the area of Australia, illustrated by the shading in Figure 26.65-3 TAS remote area, that is enclosed within the boundary of the following lines: a line from West Point to Black Bluff, to 15 NM beyond Cape Bruny, then back to West Point at a distance of 15 NM off the coastline (disregarding bays and inlets).

(2) For subsection (1):

(a) subject to paragraph (b), a line, other than a coastline, is taken to be a straight line; and

(b) a line to or from a named town is taken to come no closer than 5 NM from the town centre on the side of the town adjacent to the remote area.

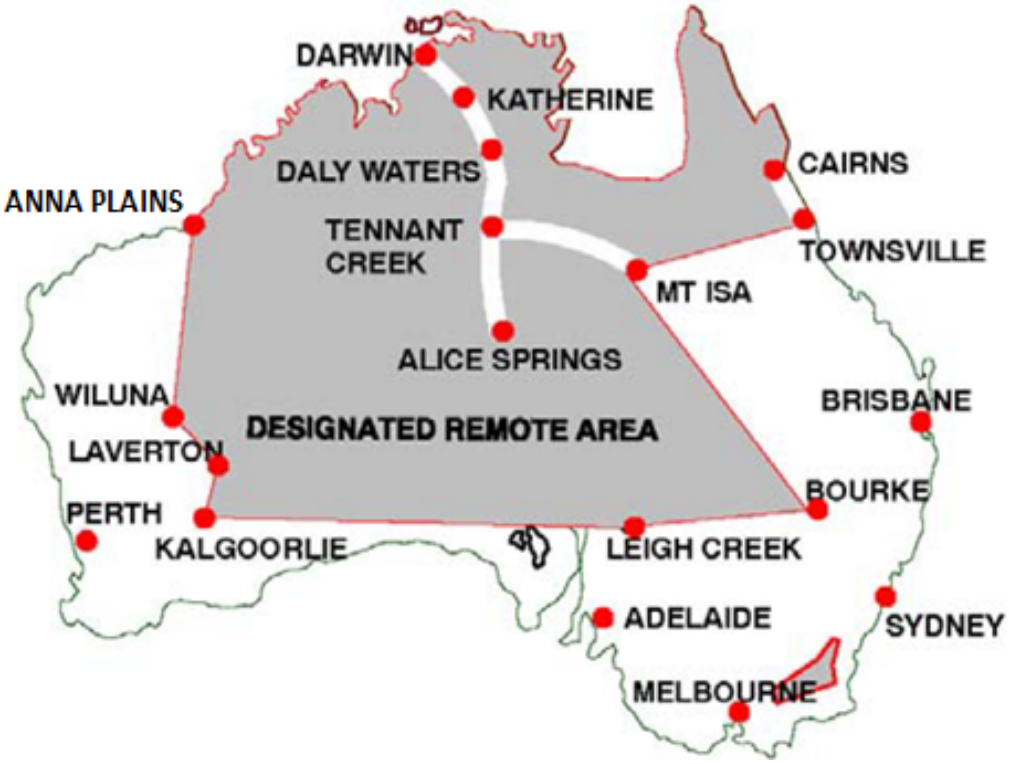

Figure 26.65-1 Central Australia Remote Area

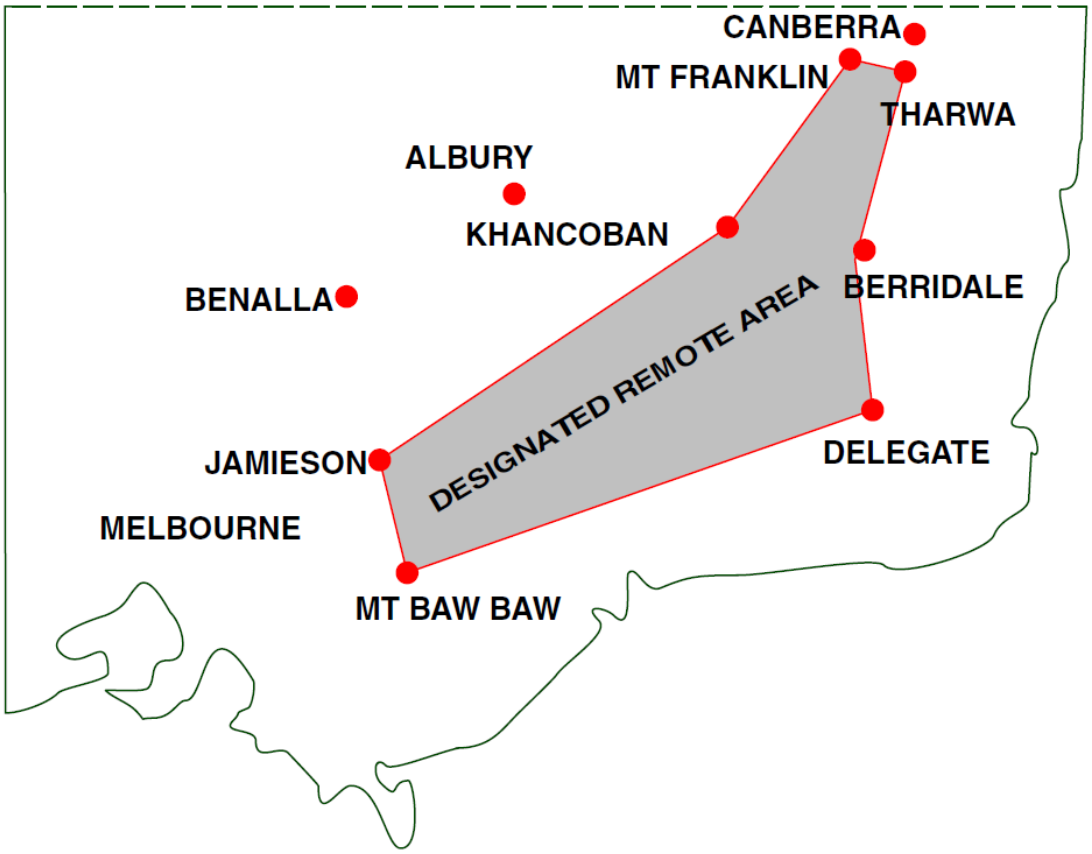

Figure 26.65-2 Snowy Mountains remote area

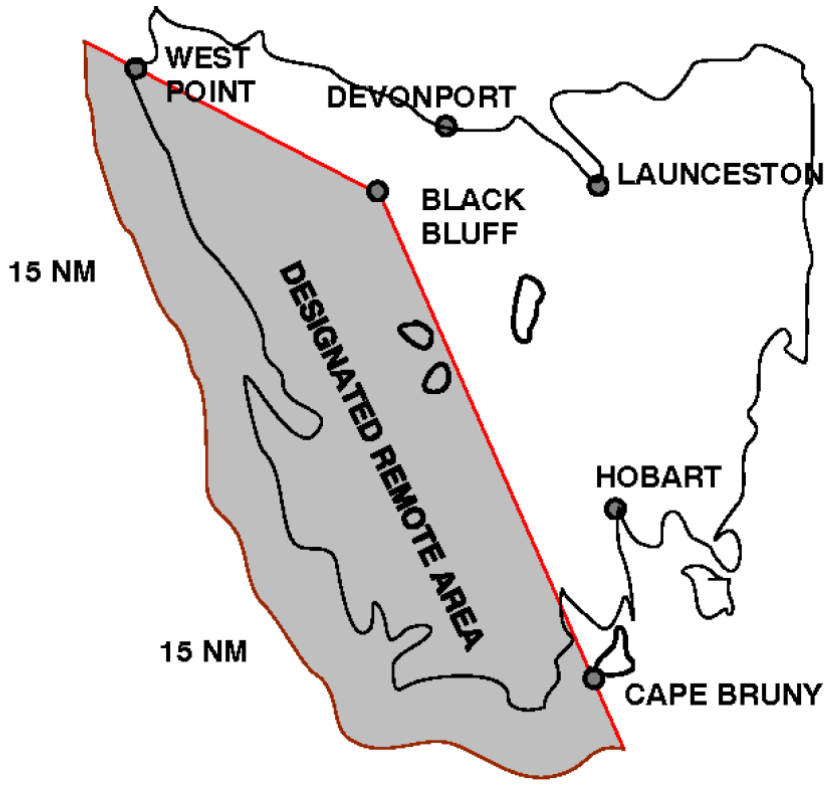

Figure 26.65-3 Tasmania remote area

Division 26.16 Surveillance equipment

26.66 Exceptions to (E)TSO or NAA requirements

(1) In this section:

relevant aircraft means any of the following:

(a) a light sport aircraft for which a special certificate of airworthiness has been issued and is in force under regulation 21.186 of CASR;

(b) a light sport aircraft for which an experimental certificate has been issued and is in force under paragraph 21.191 (j) or (k) of CASR;

(c) any other aircraft for which an experimental certificate has been issued and is in force under paragraph 21.191 (g) or (h) of CASR.

(2) A requirement in this Division that an item of equipment, or element of an item of equipment, be authorised in accordance with a particular TSO or ETSO, does not apply to a relevant aircraft in respect of any surveillance equipment if:

(a) the configuration of the surveillance equipment that is fitted or carried provides the pilot, other aircraft and ATS with the same surveillance capability as would be provided if the equipment complied with the particular TSO or ETSO; and

(b) the pilot or the operator has a statement of conformance (however described) from the equipment manufacturer stating the particular standard or standards of the TSO or ETSO with which the equipment conforms.

(3) The requirement in subsection 26.75 (4) that an approved integrated TABS device (the ***equipment***) be authorised by the relevant NAA of the equipment manufacturer does not apply to a relevant aircraft if:

(a) the configuration of the equipment that is fitted or carried provides the pilot, other aircraft and ATS with the same surveillance capability as would be provided if the equipment had been expressly authorised by the relevant NAA; and

(b) the pilot or the operator has a statement of conformance (however described) from the equipment manufacturer stating the equipment meets the requirements of this Division for the equipment.

26.67 Definitions

In this Division:

14 CFR 91.225 means regulation 91.225 of the United States Title 14 Code of Federal Regulations (CFR) titled *Automatic Dependent Surveillance-Broadcast (ADS-B) Out equipment and use*.

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.

ADS-B OUT means the functional capability of an aircraft or vehicle to periodically broadcast its state vector (position and velocity) and other information derived from on-board systems in a format suitable for ADS-B IN capable receivers.

aircraft address means a unique combination of 24 bits available for assignment to an aircraft for the purpose of air-ground communications, navigation and surveillance.

alternate ADS-B OUT equipment configuration: see paragraph (b) of the definition of ***approved ADS-B OUT equipment configuration***.

approved ADS-B OUT equipment configuration means an equipment configuration capable of ADS-B OUT operation on the ground and in flight, and that is 1 of the following:

(a) an approved Mode S transponder with ADS-B capability connected to an approved GNSS position source;

(b) an alternate ADS-B OUT equipment configuration meeting the requirements mentioned in section 26.72;

(c) another system approved under Part 21 of CASR as having a level of performance equivalent to a system mentioned in paragraph (a) or (b).

approved EC device configuration means an equipment configuration meeting the requirements mentioned in section 26.72C.

approved GNSS position source means a GNSS position source that is:

(a) authorised by the FAA or EASA in accordance with 1 of the following:

(i) (E)TSO-C145a;

(ii) (E)TSO-C146a;

(iii) (E)TSO-C196a; or

(b) an alternate GNSS position source meeting the requirements mentioned in section 26.71; or

(c) another system approved under Part 21 of CASR as having a level of performance equivalent to performance in accordance with paragraph (a) or (b).

approved integrated TABS configuration means an equipment configuration meeting the requirements mentioned in section 26.72B.

approved Mode A/C transponder means a Mode A transponder or a Mode C transponder that is authorised:

(a) by CASA or the NAA of a recognised country in accordance with TSO-C74c or ETSO-C74d; or

(b) by CASA in accordance with ATSO-1C74c.

approved Mode S transponder means a Mode S transponder that is:

(a) authorised by CASA or the NAA of a recognised country in accordance with TSO-C112 or ETSO-2C112a; or

(b) another system approved under Part 21 of CASR as having a level of performance equivalent to a system mentioned in paragraph (a).

approved Mode S transponder with ADS-B capability means an approved Mode S transponder that is:

(a) authorised by CASA or the NAA of a recognised country in accordance with (E)TSO-C166; or

(b) another system approved under Part 21 of CASR as having a level of performance equivalent to a system mentioned in paragraph (a).

approved Mode S transponder with Class B TABS position source device configuration means an equipment configuration meeting the requirements mentioned in section 26.72A.

approved transponder means an approved Mode A/C transponder or an approved Mode S transponder.

assigned aircraft address means an aircraft address that is assigned to an aircraft by:

(a) for an aircraft registered on the Australian Civil Aircraft Register — CASA; or

(c) for an aircraft that is a foreign-registered aircraft — the relevant NAA.

Class A TABS means TABS functionality relating to transponder function, altitude source function, and ADS-B OUT function, in accordance with (E)TSO-C199.

Class B TABS means TABS functionality relating to position source function, in accordance with (E)TSO-C199.

Class B TABS position source device means a device with a Class B TABS functionality.

DAPs means Mode S EHS downlink aircraft parameters.

EASA AMC 20-24 means Annex II to ED Decision 2008/004/R titled *Certification Considerations for the Enhanced ATS in Non-Radar Areas using ADS-B Surveillance (ADS-B-NRA) Application via 1090 MHz Extended Squitter*, dated 2 May 2008, of EASA.

EASA CS-ACNS means Annex I to ED Decision 2013/031/R titled *Certification Specifications and Acceptable Means of Compliance for Airborne Communications, Navigation and Surveillance CS-ACNS*, dated 17 December 2013, of EASA, or any later version.

GPS means 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.

integrated TABS device means a device with integrated Class A TABS and Class B TABS functionality.

Mode A is a transponder function that transmits a 4-digit octal identification code for an aircraft's identity when interrogated by an SSR.

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 identification code for an aircraft's pressure altitude when interrogated by an SSR.

Mode S is a transponder function that uses a unique aircraft address to selectively call individual aircraft and support advanced surveillance using Mode S EHS, Mode S ELS, or Mode S ES capabilities.

Mode S EHS means Mode S enhanced surveillance, which is a data transmission capability of a Mode S transponder.

Mode S ELS means Mode S elementary surveillance, which is a data transmission capability of a Mode S transponder.

Mode S ES means Mode S extended squitter, which is a data transmission capability of a Mode S transponder used to transmit ADS-B OUT information.

NACp means Navigation Accuracy Category – Position as specified in paragraph 2.2.3.2.7.1.3.8 of RTCA/DO-260B.

NIC means Navigation Integrity Category as specified in paragraph 2.2.8.1.16 of RTCA/DO-260B.

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 (ADS-B)*, dated 13 September 2000.

RTCA/DO-260B means RTCA Inc. document RTCA/DO-260B titled *Minimum Operational Performance Standards for 1090 MHz Extended Squitter Automatic Dependent Surveillance – Broadcast (ADS-B) and Traffic Information Services – Broadcast (TIS-B)*, dated 2 December 2009, unless a later version as in force from time to time is expressly referred to.

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.

SDA means System Design Assurance as specified in section 2.2.3.2.7.2.4.6 of RTCA/DO-260B.

SIL means Source Integrity Level as specified in paragraph 2.2.3.2.7.1.3.10 of RTCA/DO-260B.

SSR, or ***secondary surveillance radar***, means a surveillance radar system which uses transmitters/receivers (interrogators) and transponders.

surveillance equipment means equipment that broadcasts data as a means to identify an aircraft, determine its three-dimensional position or obtain other information (such as, but not limited to, velocity and selected altitude or flight level).

surveillance radar means radar equipment used to determine the position of an aircraft in range and azimuth.

TABS means traffic awareness beacon system.

transponder means an aircraft's SSR transponder.

UK CAP 1391 means Civil Aviation Authority of the United Kingdom document number CAP 1391 titled *Electronic conspicuity devices*, 2nd edition, dated April 2018, or any later edition.

26.68 Required surveillance equipment

(1) An aircraft for a flight for which surveillance equipment is required under this section must be fitted with surveillance equipment that meets the requirements relevant to the intended operation and class of airspace.

Note See section 26.66 regarding certain aircraft that can be fitted with, or carry, surveillance equipment that is not in accordance with a TSO or ETSO provided certain conditions are met.

(1A) An aircraft operating at Brisbane, Sydney, Melbourne or Perth aerodrome must be fitted with, or carry, at least 1 approved Mode S transponder with ADS-B capability.

Note An approved Mode S transponder with ADS-B capability is not required to transmit ADS-B OUT for a VFR flight.

(2) For subsection (1), an aircraft in an operation mentioned in column 1 of an item in Table 26.68 (2), in the class of airspace mentioned in column 2 of the item, must be fitted with surveillance equipment meeting the requirements mentioned in column 3 of the item.

Table 26.68 (2) – Surveillance equipment – requirements

	Column 1	**Column 2**	**Column 3**
Item	**Operation**	**Class of airspace**	**Requirements**
1	IFR	Any (Classes A, B, C, D, E and G)	At least 1 approved ADS-B OUT equipment configuration.
2	VFR	Any — from FL290 and above	At least 1 approved ADS-B OUT equipment configuration.
3	VFR	Class A, B or C (below FL290)	At least 1: (a) approved ADS-B OUT configuration; or (b) approved Mode S transponder with Class B TABS position source device configuration; or (c) approved transponder being: (i) for an aircraft, manufactured on or after 6 February 2014, or modified by having its transponder installation replaced on or after 6 February 2014 — an approved Mode S transponder

	Column 1	Column 2	Column 3
Item	**Operation**	**Class of airspace**	**Requirements**
			with ADS-B capability; or (ii) for any other aircraft — approved transponder. *Note* An approved Mode S transponder with ADS-B capability is not required to transmit ADS-B OUT for a VFR flight.
4	VFR	Class E (not above FL290) Class G — from 10 000 ft to not above FL290	At least 1: (a) approved ADS-B OUT configuration; or (b) approved equipment configuration of a Mode S transponder with Class B TABS position source device; or (c) approved transponder being: (i) for an aircraft, manufactured on or after 6 February 2014, or modified by having its transponder installation replaced on or after 6 February 2014 — a Mode S transponder with ADS-B capability; or (ii) for any other aircraft — an approved transponder; or (d) an approved integrated TABS device. *Note* An approved Mode S transponder with ADS-B capability is not required to transmit ADS-B OUT for a VFR flight.

(3) Item 4 in Table 26.68 (2) does not apply to an aircraft if the aircraft does not have:

(a) an engine; or

(b) sufficient engine-driven electrical power generation capacity to power the surveillance equipment.

26.68A Requirements for other surveillance equipment for VFR aircraft

(1) An aircraft may be fitted with, or carry, surveillance equipment in addition to the surveillance equipment required by section 26.68, but only if the requirements of this section are met.

(2) An aircraft may be fitted with, or carry, surveillance equipment in circumstances where surveillance equipment is not required by section 26.68, but only if the requirements of this section are met.

(3) For subsections (1) and (2), an aircraft in an operation mentioned in column 1 of Table 26.68A (3), in the class of airspace mentioned in column 2 of the item, may be fitted with, or carry, surveillance equipment that meets the requirements mentioned in column 3 of the item.

Table 26.68A (3) – Optional surveillance equipment – requirements

Item	Operation	Class of airspace	Capability and Requirements
	Column 1	**Column 2**	**Column 3**
1	VFR	Classes A, B, C or E — below FL290 Class G — from 10 000 ft but not above FL290	An approved EC device configuration. *Note* An EC device may be operated concurrently with a Mode A/C, or a Mode S transponder (other than one that is transmitting ADS-B — see section 26.72C.
2	VFR	Class G — below 10 000 ft	Any of the following: (a) approved ADS-B OUT configuration; (b) approved equipment configuration of a Mode S transponder with Class B TABS position source device; (c) approved transponder being: (i) for an aircraft manufactured on or after 6 February 2014, or modified by having its transponder installation replaced on or after 6 February 2014 — a Mode S transponder with ADS-B capability; or (ii) for any other aircraft — an approved transponder; (d) an approved integrated TABS device; (e) an approved EC device configuration. *Note* An approved Mode S transponder with ADS-B capability is

Item	Operation	Class of airspace	Capability and Requirements
	Column 1	**Column 2**	**Column 3**
			not required to transmit ADS-B OUT for a VFR flight. *Note* An EC device may be operated concurrently with a Mode A/C, or a Mode S transponder (other than one that is transmitting ADS-B).

26.69 Operation of surveillance equipment — general requirements

(1) The requirements of this section are subject to section 26.73.

(2) Surveillance equipment required to be fitted to, or carried on, an aircraft by section 26.68 must be continuously operated during the circumstances mentioned in section 26.68.

Note Continuous operation for a transponder means that the equipment must be operated in a mode that enables an SSR response to be transmitted and, where an altitude reporting capability is available, that this capability is also activated.

(2A) Surveillance equipment (other than approved transponders) fitted to, or carried on, an aircraft under section 26.68A must be continuously operated during the circumstances mentioned in that section for the specific kind of equipment.

(3) Subsections (2) and (2A) do not apply if ATC has issued an instruction that the surveillance equipment is not to be operated.

(4) Unless otherwise required by ATC, an aircraft that is flying in formation with, or is in-company with, 1 or more other aircraft, is not required to operate surveillance equipment if serviceable surveillance equipment is operated by any of the other aircraft at all times while the aircraft are flying in formation or are in-company.

(5) If an aircraft is fitted with more than 1 approved transponder, only 1 transponder is to be operated at any time.

(6) If an approved transponder is fitted to an aircraft for a flight, the Mode A code must be set:

(a) to the transponder code assigned by ATS for the flight; or

(b) if no transponder code is so assigned — to the relevant standard code in Table 26.69 (7).

(7) For paragraph (6) (b), for a situation mentioned in column 1 of an item in Table 26.69 (7), the Mode A code is the number mentioned in column 2 for the item.

(7A) Subject to subsection (7B), if an emergency situation described in an item of column 1 of Table 26.69 (7A) occurs during a flight, a pilot of the aircraft for the flight must set the Mode A code mentioned in column 2 for the item.

(7B) Despite subsection (7A), a pilot of an aircraft for a flight does not have to set a Mode A code mentioned in column 2 of Table 26.69 (7A) if the pilot reasonably believes that maintaining an existing Mode A code would result in a safer outcome.

(8) Pressure altitude information reported by an approved transponder or approved ADS-B OUT equipment configuration must be determined by:

(a) a barometric encoder of a type that is authorised in accordance with (E)TSO-C88a; or

(b) another system approved under Part 21 of CASR as having a level of performance equivalent to a system mentioned in paragraph (a).

Table 26.69 (7) – Transponders – Mode A standard codes

	Column 1	Column 2
Item	**Situation**	**Mode A Code**
1	(a) Flights in Class A, B, C or D airspace; (b) IFR flights in Class E airspace.	3000
2	IFR flights in Class G airspace.	2000
3	VFR flights in Class E or Class G airspace.	1200
4	Flights in Class G over water at a distance greater than 15 NM from shore.	4000
5	Flights engaged in coastal surveillance.	7615
6	Ground testing by aircraft maintenance staff.	2100

Table 26.69 (7A) – Transponders – Mode A emergency codes

	Column 1	Column 2
Item	**Situation**	**Mode A Code**
1	Unlawful interference.	7500
2	Loss of radiocommunication.	7600
3	In-flight emergency (unless otherwise instructed by ATC).	7700

26.70 Mode S transponders, ADS-B OUT and electronic conspicuity equipment — specific requirements

(1) An approved Mode S transponder fitted to an aircraft for a flight must have the following items entered into the equipment:

(a) the assigned aircraft address;

(b) as far as practicable for the equipment — 1 of the following forms of aircraft flight identification:

(i) if a flight notification is filed with ATS for the flight — the aircraft identification mentioned on the flight notification;

(ii) if no flight notification is filed with ATS for the flight — the aircraft registration mark.

(2) An approved ADS-B OUT equipment configuration, approved integrated TABS configuration or approved EC device configuration, fitted to, or carried on, an aircraft for a flight, must have the following items entered into the equipment:

(a) the assigned aircraft address;

(b) 1 of the following forms of aircraft flight identification:

(i) if a flight plan is filed with ATS for the flight — the aircraft identification mentioned on the flight plan;

(ii) if no flight plan is filed with ATS for the flight — the aircraft registration mark.

(3) An approved Mode S transponder must transmit each of the following when interrogated on the manoeuvring area of an aerodrome or in flight:

(a) the assigned aircraft address;

(b) the Mode A code;

(c) the Mode C code;

(d) subject to subsection (4) — the aircraft flight identification.

(4) Transmission of the aircraft flight identification by an approved Mode S transponder is optional for an aircraft that was first certificated in its country of manufacture before 9 February 2012 (an ***older aircraft***). However, an older aircraft that is equipped to do so may transmit its aircraft flight identification.

(5) If an approved Mode S transponder 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 ICAO Annex 10.

Note 1 Paragraph 3.1.2.10.5.2.3 includes paragraphs 3.1.2.10.5.2.3.1 and 3.1.2.10.5.2.3.2 and 3.1.2.10.5.2.3.3.

Note 2 Australian Mode S SSR supports EHS DAPs. Transmission of Mode S EHS DAPs that are not in accordance with the ICAO standards may provide misleading information to ATS. Operators need to ensure that EHS DAPs are being transmitted.

(6) If an approved Mode S transponder is fitted to an aircraft first certificated in its country of manufacture on or after 9 February 2012:

(a) that has a certificated MTOW above 5 700 kg; or

(b) that is capable of normal operation at a maximum cruising true airspeed above 250 kts;

then the transponder'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 ICAO Annex 10.

Note Paragraph 3.1.2.10.4.2.1 is recommendatory only.

(7) Subject to subsection (8), an aircraft fitted with, or carrying, ADS-B OUT equipment that is not an approved ADS-B OUT equipment configuration, approved EC device configuration, approved integrated TABS configuration or approved Mode S transponder with Class B TABS position source device configuration, 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, NACp, NIC or SIL.

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

(8) Subsection (7) does not apply to an aircraft if it is undertaking an ADS-B test flight in VMC in airspace below FL 290.

26.71 Alternate GNSS position source for ADS-B OUT — requirements

(1) For an aircraft first certificated in its country of manufacture on or after 8 December 2016, an alternate GNSS position source is acceptable if the source:

(a) is certified by the NAA of a recognised country for use in IFR flight; and

(b) has included in its specification and operation the following:

(i) GNSS FDE, computed in accordance with the definition at paragraph 1.7.3 of ***RTCA/DO-229D***;

(ii) the output function HPL, computed in accordance with the definition at paragraph 1.7.2 of ***RTCA/DO-229D***;

(iii) 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.

(2) For an aircraft first certificated in its country of manufacture before 8 December 2016, an alternate GNSS position source is acceptable if it meets the requirements of subsection (1), other than subparagraph (1) (b) (iii) which is optional.

26.72 Alternate ADS-B OUT equipment configuration — requirements

An alternate ADS-B OUT equipment configuration must meet the following requirements:

(a) it has been approved or accepted by:

(i) the NAA of a recognised country as meeting the standards of EASA AMC 20-24 or EASA CS-ACNS; or

(ii) the FAA as meeting the standards of 14 CFR 91.225 for 1090 Megahertz (MHz) Extended Squitter ADS-B; and

(b) the AFM or flight manual supplement attests to the certification; and

(c) the GNSS system meets the relevant performance requirements mentioned in section 26.71.

26.72A Approved Mode S transponder with Class B TABS position source device equipment configuration — requirements

(1) A Mode S transponder must be of a type that is:

(a) authorised in accordance with (E)TSO-C166B; or

(b) approved under Part 21 of CASR as having a level of performance equivalent to that of a type compliant with paragraph (a).

(2) When required to be operated, the Mode S transponder must transmit NACp, NIC, SIL and SDA values in accordance with the authorised capability of the GNSS position source.

(3) The geographical position transmitted by the Mode S transponder must be determined by:

(a) a Class B TABS position source device that is authorised in accordance with (E)TSO-C199; or

(b) another source approved under Part 21 of CASR as having a level of performance equivalent to that of a device compliant with paragraph (a).

(4) If a Mode S transponder with Class B TABS position source device transmits a SIL value of less than 2, the aircraft must not enter any controlled airspace in which the aircraft must be fitted with, or carry, equipment that is of an approved ADS-B OUT equipment configuration.

26.72B Approved integrated TABS device — requirements

(1) An approved integrated TABS device (the ***device***) must only be operated in transmitting mode if the flight is conducted:

(a) under the VFR; and

(b) below FL290; and

(c) in Class D, E or G airspace.

(2) The device must meet the technical specifications in (E)TSO-C199 that are for a device with integrated Class A TABS and Class B TABS functionality.

(3) The device must transmit a SIL value of 1.

(4) The device must be authorised by the relevant NAA of the equipment manufacturer as meeting the standards mentioned in subsections (2) and (3).

Note Section 26.66 provides for an exception to the relevant NAA authorisation requirement for certain kinds of light sport, experimental and other aircraft.

26.72C Approved EC device — requirements

(1) An approved EC device (an ***EC device***) must only be operated in transmitting mode if the flight is conducted:

(a) under the VFR; and

(b) below FL290.

(2) The EC device must not be operated in transmitting mode concurrently with a Mode S transponder that is also transmitting ADS-B.

Note An EC device may be operated concurrently with a Mode A/C, or a Mode S transponder (other than one that is transmitting ADS-B) but it is not a substitute for mandatory carriage of a transponder in relevant airspace.

(3) The EC device must meet the technical specifications in UK CAP 1391, except in relation to the matters mentioned in subsections (4), (5) and (6).

(4) The EC device must use a Class B TABS position source that complies with the performance standards specified in (E)TSO-C199.

(5) The EC device must:

(a) be capable of transmitting a SIL value of 1, in accordance with the standards in UK CAP 1391 for an EC device that uses a Class B TABS position source; and

(b) transmit that SIL value of 1.

(6) The EC device must:

(a) meet the requirements described in paragraph 2.2.3.2.7.2.4.6 of RTCA/DO-260B for transmitting an SDA of 1; and

(b) transmit an SDA value of 1.

(7) The EC device must use a barometric encoder for altitude information.

(8) The EC device must be mounted in accordance with the manufacturer's instructions.

(9) The EC device, when mounted in accordance with the manufacturer's instructions, must not:

(a) interfere with aircraft controls; or

(b) otherwise affect the safe operation of the aircraft.

(10) The following administrative standards for the EC device must be complied with:

(a) an EC device must have a statement of compliance (however described) from the EC device manufacturer certifying that the device meets the following requirements (***a declaration of capability and conformance*** or ***declaration***):

(i) if the declaration was made before 2 December 2021 — clauses 1 to 5 of Part B of Appendix XIV of Civil Aviation Order 20.18 as in force immediately before 2 December 2021;

(ii) otherwise — subsections (3) to (7);

(b) the pilot in command of an aircraft that uses the EC device must carry the declaration, or a copy of it, on board the aircraft;

(c) an EC device model must not be operated in a transmit mode anywhere in Australia unless it is listed on the CASA website as an EC device model for which the manufacturer has made a valid declaration;

(d) the manufacturer of an EC device model may apply in writing to CASA:

(i) for a statement that CASA considers that the manufacturer has made a valid declaration of capability and conformance to subsections (3) to (7); and

(ii) for inclusion of the EC device model on the CASA website;

(e) CASA may remove an EC device model from the CASA website if:

(i) the manufacturer requests its removal in writing; or

(ii) if CASA is satisfied that removal is required in the interests of aviation safety.

26.73 Aircraft flown with inoperative surveillance equipment

Surveillance equipment required by section 26.68 may be inoperative at the beginning of a flight if:

(a) the flight begins from an aerodrome at which there is no facility for the surveillance equipment to be repaired or replaced; and

(b) the flight ends not more than 72 hours after the time the surveillance equipment was found to be inoperative; and

(c) before the flight commences, the pilot in command informs ATS about the unserviceability.

Note See also section 26.04 for additional requirements related to flight with inoperative equipment. For a flight with inoperative surveillance equipment, within controlled airspace or at a controlled aerodrome, Division 11.2 has requirements related to ATC clearances. Whether a clearance is issued, or when a clearance may be issued, could be affected by the flight's inoperative equipment.

Division 26.17 Equipment for NVIS flights

26.74 Purpose

For subregulation 91.810 (1), this Division prescribes requirements relating to:

(a) the fitment and non-fitment of NVIS equipment to an aircraft; and

(b) the carrying of NVIS equipment on an aircraft; and

(c) NVIS equipment that is fitted to, or carried on, an aircraft.

Note The effect of item 16 of Table 91.035 is that this Division 26.17 applies to all NVIS flights except NVIS flights conducted as a Part 133 operation. The Part 133 MOS contains the equipment requirements for such flights.

26.74A Application

(1) This Division applies in relation to the use of NVIS by a flight crew member of an aircraft in an NVIS flight.

(2) This Division does not apply in relation to the use of NVIS by a person on an NVIS flight who is not a flight crew member, unless the person is involved in air navigation or terrain avoidance functions.

26.75 Definitions

adverse event means any event or incident in which life or property is:

(a) lost, injured or damaged in, on or by an aircraft in which NVIS is used; or

(b) at significant risk of loss or damage in, on or by an aircraft.

Note The following are some examples of significant risks: a near miss; NVIS equipment failure, malfunction or abnormal operation; the failure, malfunction or abnormal operation of NVIS-related or affected equipment; unintentional IMC penetration; inadvertent loss of visibility; abnormal degree or accelerated onset of fatigue.

NVIS certified means that an aircraft has been modified for NVIS flight by 1 of the following:

(a) an approval under Part 21 of CASR;

(b) the type certificate holder under the type certificate;

(c) a supplemental type certificate.

NVIS compatible lighting means aircraft interior or exterior lighting:

(a) with spectral wavelength, colour, luminance level and uniformity, that has been modified, or designed, for use with NVIS; and

(b) that does not degrade or interfere with the image intensification capability performance of the NVIS beyond acceptable standards mentioned in subsection 26.76 (2).

26.76 Aircraft general and lighting standards for NVIS flights

(1) An aircraft for an NVIS flight must be NVIS certified.

Note NVIS certification means that the aircraft also has NVIS compatible lighting.

(2) The design of a required aircraft lighting system modification for an NVIS flight must be based on the requirements of:

(a) RTCA/DO-275, as in force from time to time; or

(b) MIL-STD-3009, Lighting, Aircraft, NVIS Compatible, of the US Department of Defense, as in force from time to time.

26.77 Performance and other specifications for NVG image intensifier tubes

(1) NVG image intensifier tubes for an NVIS flight must meet the minimum operational performance specification that is:

(a) defined in RTCA/DO 275, as in force from time to time, as modified in accordance with subsection (5); or

(b) approved in writing by CASA as equivalent to that under paragraph (a) in terms of tube resolution, system resolution, system luminance gain, photosensitivity and signal to noise ratio.

(2) Each NVG image intensifier tube and associated NVIS equipment (the ***NVG tubes and equipment***) must be:

(a) certified by its manufacturer as being for aviation use; and

(b) identified by the manufacturer's unique serial number; and

(c) acquired (with or without valuable consideration) by the aircraft operator directly from:

(i) the manufacturer or the manufacturer's official supplier (an ***official source***); or

(ii) a person who acquired it directly from an official source (the ***initial acquirer***); or

(iii) a person who acquired it as the first or later acquirer in a line of direct and provable acquisitions originating from the initial acquirer (a ***subsequent acquirer***); and

Note 1 In this subsection, "acquired (with or without valuable consideration)" refers to, for example, an acquisition through a purchase or a donation or in any other way.

Note 2 CASA considers the source of second-hand NVG tubes and equipment to be a matter that may affect safety.

(d) in the case of replacement of NVG image intensifier tubes with tubes that are sourced from other than an official source — as follows:

(i) replaced as a pair;

(ii) of the same form, fit and function as the tubes being replaced;

(iii) such that the replacement does not to involve modification of the NVIS mounting frame or optical components;

(iv) compliant with paragraph (1) (a).

Note For guidance only, US AN/AVS 9 NVIS, although manufactured by different manufacturers, are produced to the same US Department of Defense specification and, therefore, these tubes are interchangeable.

(3) If 2 or more NVIS pilots on an NVIS flight use dissimilar NVG image intensifier tubes and equipment, the pilot in command must use the highest level of NVIS tubes and equipment in terms of resolution, gain and acuity.

Note Use of dissimilar NVIS does not remove the requirement that the minimum standard of any set used must be in accordance with subsections (1) and (2).

(4) An NVIS pilot who occupies a control seat of an aircraft during an NVIS flight must use the NVIS manufacturer's approved helmet mounted attachment device for the NVIS.

(5) For paragraph (1) (a), column 3 of each item of Table 26.77 (5) shows how a relevant operational performance specification in the paragraph of RTCA/DO-275 mentioned in column 1 of the item, and summarised (if any) in column 2 of the item, is modified.

Table 26.77 (5) — Modifications of RTCA/DO 275

	Column 1	**Column 2**	**Column 3**
Item	**RTCA/DO-275 (as in force from time to time)**	**Summary**	**Amended performance requirement**
1	Para 2.2.1.1 System Resolution	1.0 cycles per milliradian (cy/mr). At 14º off axis = 0.81 cy/mr	1.3 cy/mr

	Column 1	Column 2	Column 3
Item	**RTCA/DO-275 (as in force from time to time)**	**Summary**	**Amended performance requirement**
		With a variable focus @ through infinity = 0.49cy/mr	
2	Para 2.2.1.2 System Luminance Gain – Filmed non-autogating	= 2 500 foot-Lamberts (fL) per fL at an input light level of 1 x 10^{-4} fL	= 5 500 foot-Lamberts (fL) per fL at an input light level of 1 x 10^{-4} fL = 1750 cd/m^2/lx at an input light level of 1.1 x 10^{-3} lx
3	System Luminance Gain – Filmless autogating		=16 000 cd/m^2/lx at an input light level of 2 x 10^{-5} lx
4	Para 2.2.1.3 Field-of-View	38º vertical and horizontal	40º
5	Para 2.2.1.4 Magnification	1:1 +/- 2%	1:1
6	Para 2.2.1.7.1 Spectral Transmission	Meet Class B filter requirements	Class B filter
7	Para 2.2.1.10 Eyepiece Diopter Range	Adjustable +1.0 to –2.0, or Fixed –0.5 and –1.0	+2 to -6
8	Para 2.2.1.12 Objective Focus Range	Adjustable from beyond infinity to no greater than 45 cm close range	25 cm close
9	Para 2.2.13 Exit Pupil/Eye Relief	Type I – 25 mm, Type II – 20 mm	25 mm
10	Para 2.2.2.3 Flip-Up/Flip Down	Required capability	Push button
11	Para 2.2.2.4 Fore-and-Aft Adjustment	Sufficient to align with users' eyes	27 mm total
12	Para 2.2.2.4 Tilt Adjustment	Sufficient to align with users' eyes	10º
13	Para 2.2.2.5 Interpupillary Adjustment	Desired but not required. If not installed, exit pupil must be large enough to see full FOV	51 to 72 mm

	Column 1	Column 2	Column 3
Item	**RTCA/DO-275 (as in force from time to time)**	**Summary**	**Amended performance requirement**
14	Para 2.2.2.6 Voltage Required	2.7 – 3.0 V DC 50mA nominal Backup power supply required	2.7 – 3.0 V DC 50mA nominal Backup available
15	Technology	Intensifier tubes not specified	Not specified
16	Photosensitivity filmed non-autogating	Not specified	1 800 µA/lm
17	Photosensitivity filmless autogating		800 µA/lm
18	Tube Resolution	Not specified	64 line pairs per millimetre (lp/mm)
19	Signal to Noise Ratio Filmed non-autogating	Not specified	21:1
20	Signal to Noise Ratio Filmless Autogating		25:1

26.78 Maintenance of the NVIS and its components

(1) For an NVIS flight, the NVIS equipment must be maintained, stored, and checked for serviceability, in accordance with the manufacturer's requirements and procedures.

(2) NVIS equipment must have a documented maintenance program to ensure that:

(a) maintenance, inspection, and serviceability standards for the NVIS are met; and

(b) a biennial assessment is made to identify and rectify any degradation in the compatibility of the aircraft lighting systems with the NVIS.

Note RTCA/DO-275 (as in force from time to time) provides guidance for the ongoing maintenance of installed NVIS compatible systems.

(3) The maintenance program must include a method for assessing NVIS compatibility with any subsequent aircraft modification, equipment introduction or repair that may have an effect on the aircraft's NVIS compatibility.

(4) Any item of equipment other than NVIS equipment, that is fitted to, or carried on, the aircraft must not at any time adversely affect the safe operation of the aircraft in an NVIS flight.

(5) Maintenance of NVIS must be carried out by an organisation that:

(a) complies with regulation 30 of CAR or Part 145 of CASR as if the regulation or the Part applied to the organisation for the maintenance of NVIS and its related equipment; and

(b) is endorsed in writing by the manufacturer of the NVIS as an appropriate organisation to carry out maintenance on the NVIS.

(6) To avoid doubt, for subsection (5), maintenance includes routine scheduled servicing of NVIS.

(7) An organisation endorsed by a manufacturer under paragraph (5) (b) for any particular NVIS manufactured in the United States (the ***US***) that complies with the specification mentioned in paragraph 26.77 (1) (a) is taken to be endorsed for any other NVIS that:

(a) is manufactured in the US and is available in Australia; and

(b) complies with the specification mentioned in paragraph 26.77 (1) (a).

Note This provision is to ensure that an endorsement given to an organisation by an original US manufacturer of paragraph 26.77 (1) (a)-compliant NVIS, is taken to be an endorsement for any other US manufactured NVIS available in Australia that complies with paragraph 26.77 (1) (a).

(8) If:

(a) 1 or more image intensification tubes (***tubes***) fail for any reason during an NVIS flight; or

(b) 1 or more tubes fail at any time as a result of a suspected error in maintenance;

then the operator must, within 28 days of the failure, report the failure to CASA through the Service Difficulty Reporting System using ATA Code 2590.

(9) For paragraph (5) (b):

manufacturer means the person who is:

(a) the original manufacturer of the NVIS; or

(b) the original manufacturer of the NVG image intensification tubes fitted to the NVIS; or

(c) if parts of the NVIS are manufactured by different persons — the person who makes the final assembly of the parts into the NVIS.

26.79 Minimum aircraft equipment for NVIS flight

(1) Subject to subsection (2), before an NVIS flight, the aircraft must be fitted with a serviceable radio altimeter that:

(a) conforms to the following requirements:

(i) it must have a display presentation that requires minimal interpretation for both an instantaneous impression of absolute height and rate of change of height;

(ii) subject to subsection (2), it must be positioned to be instantly visible and discernible to each NVIS crew member from the person's station in the cockpit;

(iii) it must have an integral audio and visual low height warning that operates at a height selectable by the pilot;

(iv) it must provide unambiguous warning to each NVIS crew member of radio altimeter failure; and

(b) has a visual warning system that provides clear visual warning at each cockpit crew station of height below the pilot-selectable height; and

(c) has an audio warning system that:

(i) is unambiguous and readily cancellable; and

(ii) when cancelled — does not extinguish any visual low height warnings; and

(iii) operates at the same pilot-selectable height as the visual warning.

(2) Subparagraph (1) (a) (ii) does not take effect until 2 December 2023.

(3) A rotorcraft for an NVIS operation must be fitted with a serviceable pilot-steerable searchlight, adjustable in both pitch and azimuth from the flight controls.