

## **Part 137—Aerial application operations—other than rotorcraft**

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## **Subpart 137.A—Applicability and definitions**

### **137.005 Applicability**

- (1) Subject to this regulation, this Part applies to aerial application operations using aeroplanes.

#### *Operators*

- (2) This Part applies to a person who is applying for an AOC, on or after the commencing day, to authorise the person to undertake application operations.
- (3) If:
- (a) a person has applied, on or after the application day but before the commencing day, for an AOC to authorise the holder to undertake agricultural operations or purposes substantially similar to agricultural operations; and
  - (b) before the commencing day, the person has not been issued with the AOC; this Part applies to the person and the application as if:
    - (c) the application had been made on the commencing day; and
    - (d) the application was for an authorisation to undertake application operations.
- (4) If, on the commencing day, a person holds an AOC that covers agricultural operations or purposes substantially similar to agricultural operations:
- (a) the person may, after the commencing day, prepare and submit to CASA an operations manual; and
  - (b) this Part applies to the person and the manual as if the person was applying for an AOC on or after the commencing day to authorise the person to undertake application operations.
- (5) This Part applies on and after the day that falls 12 months after the commencing day to a person who has an AOC that authorises the person to undertake agricultural operations or purposes substantially similar to agricultural operations if:
- (a) that AOC is in effect on that day; and
  - (b) this Part does not otherwise apply to the person.

#### *Pilots*

- (6) If:
- (a) a pilot is engaged in an application operation on or after the commencing day; and
  - (b) the pilot is not employed by an operator for that operation; this Part applies to the pilot for that operation.
- (7) If:

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- (a) this Part applies to an operator on a particular day; and
- (b) a pilot employed by the operator undertakes an application operation for the operator on that day;

this Part applies to the pilot for that operation.

- (8) In this regulation:

**application day** means the day that falls 30 days before the day this Part commences.

**commencing day** means the day this Part commences.

### 137.010 Definitions

In this Part:

**aerial application operation** (or application operation) means:

- (a) a flight that is carried out by an aeroplane to apply application material; and
- (b) a flight by an aeroplane that is for, or partly for, 1 or more of the following:
  - (i) inspection of a work area;
  - (ii) pilot training or checking relating to a flight mentioned in paragraph (a);
  - (iii) training of a crew member other than the pilot;
  - (iv) travel from a landing area to a work area and back;
  - (v) the carriage of a passenger specified in regulation 137.135 for a purpose set out in that regulation; and
- (c) preparation for any activities mentioned in paragraphs (a) and (b).

**application material** means fertiliser, trace elements, seeds, baits, water, pesticides or other material.

**apply**, in relation to application material, means to drop or spray the material onto the ground or water.

**crew member** includes a person who is on board an aeroplane to give, or receive, training in an aspect of application operations.

**employ**, in relation to a pilot, includes to engage as an independent contractor.

**GPS marking system** means a system that uses global positioning system equipment to show the flight path required for an aeroplane when applying application material.

**head of aeroplane maintenance control**, in relation to an operator, means the person who holds the position whose duties include those mentioned in regulation 137.070.

**head of flight operations**, in relation to an operator, means the person who holds the position whose duties include those mentioned in regulation 137.065.

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**key personnel position**, in relation to an operator, means the positions of head of aeroplane maintenance control and head of flight operations for the operator.

**landing area** means a place, whether or not an aerodrome, where an aeroplane is able to take off and land.

**MEL**, or **minimum equipment list**, for an aeroplane, means an approved list that provides for the operation of the aeroplane with particular equipment inoperative, and sets out any special conditions for such operation.

**operations manual**, in relation to an operator or an application operation carried out by an operator, means:

- (a) the manual, and the schedule of differences (if any), approved under regulation 137.050; and
- (b) any amendments approved under regulation 137.080, 137.085 or 137.090, as appropriate.

Note: An operations manual may comprise a standard operations manual and a schedule of differences: see subregulation 137.035(2).

**operator**, in relation to an aeroplane, means a person who holds an AOC that authorises the use of the aeroplane in application operations.

**populous area**, in relation to a flight by an aeroplane, means an area where, if the aeroplane's engine failed, the aeroplane would not be able to glide safely clear of any occupied building.

**resting time**, for a pilot, means any time during a tour of duty when the pilot:

- (a) has no duties to perform; and
- (b) has access to accommodation that is conducive to rest and includes a comfortable chair.

**role equipment** means equipment fitted to an aeroplane for an application operation, including booms, spreaders and mirrors.

**schedule of differences**, for an operator, means the schedule prepared by the operator under paragraph 137.045(3)(c) and approved by CASA under regulation 137.050.

**sleeping time**, for a pilot, means any time during a tour of duty when the pilot:

- (a) has no duties to perform; and
- (b) has access to a comfortable room that:
  - (i) is subject to minimal noise levels; and
  - (ii) is well ventilated; and
  - (iii) is equipped with a method of controlling the entry of light; and
  - (iv) is equipped with a comfortable bed and chair.

**standard operations manual** means an operations manual approved under regulation 137.040.

**work area**, in relation to an application operation, means:

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- (a) the area of ground or water where application material is to be applied; and
- (b) the area over which the aeroplane concerned flies as it approaches and departs from the area mentioned in paragraph (a).

## **Subpart 137.B—General**

### **137.015 Approvals**

If a provision of this Part provides that anything (including a document, body or activity) must be approved, CASA may approve the thing, in writing, for the provision.

### **137.020 Effect of other provisions**

If a provision in these Regulations is inconsistent with a provision in this Part, the provision in this Part prevails to the extent of the inconsistency.

### **137.025 Aeroplane—type certificate**

- (1) If an aeroplane does not conform to a type certificate or type acceptance certificate in the normal, restricted or utility category:
  - (a) the operator of the aeroplane must not allow it to be used for an application operation; and
  - (b) a pilot must not use it to carry out an application operation.

Penalty: 50 penalty units.

- (2) A contravention of subregulation (1) is an offence of strict liability.

Note: CASA may grant an exemption from a provision of these Regulations: see Subpart 11.F.

### **137.030 Authority of the pilot**

The operator of an aeroplane must take all reasonable measures to ensure that, if the pilot in command of the aeroplane, acting in accordance with a provision of these Regulations, directs anybody to do something, or not do something, the person complies with the direction.

## **Subpart 137.C—Operator certification and supervision**

### **137.035 Applicant to prepare manual**

- (1) A person applying for an AOC to cover application operations must prepare a manual that:
  - (a) specifies procedures to be followed by crew members and other persons to ensure the safety of the operations that are to be covered by the AOC; and
  - (b) includes the names of the persons who are to be the CEO and holders of the key personnel positions.
- (2) The person may comply with subregulation (1) by:
  - (a) nominating a standard operations manual to apply to the person's operations; and
  - (b) preparing a schedule of differences to the standard operations manual.
- (3) The manual may:
  - (a) consist of 1 or more volumes; and
  - (b) include material prepared by someone other than the person making the application; and
  - (c) incorporate another document or documents by reference.

Note: CASA approves the manual under regulation 137.050 when approving the application for the AOC.

### **137.040 Standard operations manual**

- (1) CASA may approve, in writing, a manual prepared by a person other than an operator, as a standard operations manual.
- (2) The manual must specify procedures to be followed by crew members of aeroplanes and other persons engaged in application operations to ensure the safety of the operations.

### **137.045 Application for an AOC or variation of an AOC**

- (1) An application by a person for an AOC to cover application operations must be submitted to CASA at least 90 days before the date of intended operation.
- (2) The manual that, for subsection 27AB(2) of the Act, must be lodged with CASA by the person need not include landing area information.
- (3) If the person nominates a standard operations manual the application must include:
  - (a) a statement identifying the standard operations manual; and
  - (b) an undertaking to comply with the standard operations manual as in force from time to time; and



- (c) a schedule to the standard operations manual, prepared by the applicant, showing:
  - (i) the ways (if any) in which the person's application operations are proposed to differ from those described in the standard operations manual adopted by the person under paragraph (b); and
  - (ii) the names of the persons who are proposed to be the CEO and holders of the key personnel positions.
- (4) The manual or schedule (if any) that relates to the application must be submitted to CASA at least 60 days before the date of intended operation.
- (5) An application for a variation of an AOC must be submitted to CASA at least 30 days before the date of the proposed change to the operation.

Note: For matters about which CASA must be satisfied before issuing an AOC, see section 28 of the Act.
- (6) CASA may accept an application later than required under subregulation (1) or (5), or a late submission under subregulation (4).

### **137.050 Decision on AOC and manual**

- (1) CASA must, in writing, approve or refuse to approve:
  - (a) an application for an AOC; and
  - (b) an application for a variation of an AOC.
- (2) If CASA approves an application for an AOC under subregulation (1), it is taken to have approved:
  - (a) the applicant's manual; and
  - (b) if applicable—the schedule mentioned in paragraph 137.045(3)(c).
- (3) CASA is taken to have refused an application for an AOC if it has not approved or refused the application within the period of 90 days starting on the later of the following:
  - (a) the day the application is made;
  - (b) the day the applicant has complied with any notice given by CASA under section 27AC of the Act.
- (4) CASA is taken to have refused an application for a variation of an AOC if it has not approved or refused the application within the period of 90 days starting when the application is made.

### **137.055 Offences concerning operations manual**

- (1) An operator must conduct application operations in accordance with:
  - (a) the operations manual; and
  - (b) if the operator has an exemption given by CASA under Part 11—the exemption.

Penalty: 25 penalty units.

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- (2) The operator must ensure that the manual, and information relating to any exemption, is available to crew members and other persons engaged in application operations for the operator.

Penalty: 25 penalty units.

- (3) A contravention of subregulation (1) or (2) is an offence of strict liability.

### **137.060 Operator's organisational structure**

- (1) An operator must nominate an individual to be chief executive officer (**CEO**) of the operator's organisation.
- (2) The CEO must be responsible for ensuring that all application operations and aeroplane maintenance can be carried out to the standard required by these Regulations.
- (3) An operator must nominate individuals to hold the key personnel positions in the organisation.
- (4) If, having regard to the size of an operator's organisation or the nature and scope of operations authorised by the operator's AOC, it would not adversely affect the safety of the operations to do so, an operator may:
  - (a) appoint a person to a key personnel position on a part-time basis; or
  - (b) appoint a person to more than 1 key personnel position.
- (5) An operator must ensure that, at all times, a person is occupying, or acting in, each key personnel position.

### **137.065 Head of flight operations**

- (1) Subject to subregulation (5), an operator must nominate an individual to be head of flight operations in the operator's organisation.
- (2) The duties of the head of flight operations must include being responsible for the following:
  - (a) monitoring the operator's compliance with the Act, these Regulations and the conditions to which the operator's AOC is subject, and reporting on compliance to the operator's CEO;
  - (b) monitoring the adequacy of the operator's systems and procedures to ensure safe operations under the operator's AOC, and reporting on the adequacy of the systems and procedures to the CEO;
  - (c) arranging rosters for the pilots employed to carry out application operations for the operator;
  - (d) maintaining an efficient system for recording flight and duty times for each pilot;
  - (e) maintaining up-to-date records of all licences, ratings, medical certificates and endorsements held by each pilot;

- (f) maintaining a system that will ensure compliance with the relevant loading procedures for each type of aeroplane used in operations carried out under the operator's AOC;
  - (g) ensuring that the operator keeps any documents required by the Act, these Regulations and the conditions of the operator's AOC;
  - (h) setting and monitoring the standard of application operations, including activities on the ground, carried out under the operator's AOC;
  - (i) ensuring that the checking required by Subpart 137.N is carried out and, if a pilot fails a check, that the appropriate retraining and re-checking are carried out;
  - (j) allocating an aeroplane for use in each operation carried out under the operator's AOC.
- (3) If an operator uses only 1 aeroplane for application operations, the person occupying the position of head of flight operations must have at least 300 hours total flight time as pilot in command in application operations.
- (4) If an operator uses more than 1 aeroplane for application operations, the person occupying the position of head of flight operations must hold an agricultural pilot (aeroplane) grade 1 rating within the meaning given in Civil Aviation Order 40.6.
- (5) A person who, under Civil Aviation Order 82.0, is approved as Chief Pilot of an operator, is taken to be the head of flight operations for the operator.

### **137.070 Head of aeroplane maintenance control**

- (1) An operator must nominate an individual to be head of aeroplane maintenance control in the operator's organisation.
- (2) The duties of the head of aeroplane maintenance control must include ensuring that the operator complies with Subpart 137.M.

### **137.075 Replacement of holder of key personnel position**

If an operator proposes a replacement of the holder of a key personnel position, the operator must:

- (a) notify CASA as soon as is practicable before the proposed replacement;  
and
- (b) if the replacement does not take effect—notify CASA accordingly.

### **137.080 Amendments to operations manual by operator**

- (1) This regulation applies to an operator that:
  - (a) is using an operations manual prepared by the operator; and
  - (b) proposes a change to a procedure or another matter that, because of its nature, would require amendment of the manual.
- (2) The operator must:

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- (a) prepare an amendment to the manual to reflect the proposed change; and
  - (b) give the amendment to CASA as soon as practicable after preparing it and before implementing the change.
- (3) CASA must, in writing, approve or refuse to approve the proposed amendment.

#### **137.085 Amendments to schedule of differences**

- (1) This regulation applies to an operator that:
- (a) has adopted a standard operations manual; and
  - (b) proposes a change to a procedure or another matter that, because of its nature, would require amendment of the schedule of differences.
- (2) The operator must:
- (a) prepare an amendment to the schedule to reflect the proposed change; and
  - (b) give the amendment to CASA as soon as practicable after preparing it and before implementing the change.
- (3) CASA must, in writing, approve or refuse to approve the proposed amendment.

#### **137.090 Amendments to standard operations manual**

- (1) A person that has prepared a standard operations manual may prepare an amendment of the manual.
- (2) The person must submit the amendment to CASA.
- (3) CASA must, in writing, approve or refuse to approve the amendment.

## **Subpart 137.D—Operational procedures**

### **137.095 Operation to be in VMC**

- (1) The pilot in command of an aeroplane may only conduct an application operation in VMC.

Penalty: 25 penalty units.

- (2) A contravention of subregulation (1) is an offence of strict liability.

### **137.100 Use of weather forecasts or observations**

- (1) This regulation applies to the operator of the aeroplane and its pilot in command if the operator is planning an application operation that is to take place more than 50 nautical miles from the take-off aerodrome.

- (2) The operator and pilot must:

- (a) use a weather forecast or report prepared by the Bureau of Meteorology or another approved body; or

- (b) if the pilot is not reasonably able to obtain a weather forecast or report of a kind mentioned in paragraph (a)—satisfy subregulation (4).

Penalty: 5 penalty units.

- (3) The operator must provide any equipment necessary to obtain the forecast or report.

Penalty: 10 penalty units.

- (4) The operator and pilot satisfy this subregulation if the pilot:

- (a) uses his or her observations, or weather information from a source other than those mentioned in paragraph (2)(a); and

- (b) the pilot reasonably believed it was safe to use the observations or information.

- (5) A contravention of subregulation (2) or (3) is an offence of strict liability.

### **137.105 Landing areas**

Despite any other provision of these Regulations, the pilot in command of an aeroplane engaged in an application operation may use any landing area that can be used safely for take-offs and landings.

### **137.110 Safety of persons other than crew at landing areas**

- (1) The operator of an aeroplane must, for the safety of persons during application operations at a landing area:

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- (a) use appropriate procedures, including those necessary for the safe loading and unloading of aeroplanes; and
- (b) provide appropriate equipment, including any necessary lighting.

Penalty: 25 penalty units.

- (2) The procedures must be set out in the operations manual.
- (3) A contravention of subregulation (1) is an offence of strict liability.

### **137.115 Refuelling**

- (1) An operator must use appropriate safety procedures for the refuelling of each of the operator's aeroplanes that is used in an application operation.

Penalty: 25 penalty units.

- (2) The operations manual must set out the procedures.
- (3) A contravention of subregulation (1) is an offence of strict liability.

### **137.120 Documents to be carried on a flight**

- (1) The pilot in command of an aeroplane being used for an application operation must have a copy of the aeroplane's flight manual, or an approved alternative document, on board the aeroplane on every flight.

Penalty: 10 penalty units.

- (2) The pilot must also have the documents or copies mentioned in subregulations (4) and (5) on board the aeroplane on a flight if the aeroplane will be more than 1 hour's flying time (at cruise speed in still air) from the operator's principal operating base.

Penalty: 10 penalty units.

- (3) However, if:
  - (a) the aeroplane is to be based for more than 7 days at a place that is not the operator's principal operating base (a *substitute base*); and
  - (b) the aeroplane is less than 1 hour's flying time (at cruise speed in still air) from the substitute base;

the documents or copies mentioned in subregulations (4) and (5) may be kept at the substitute base.

- (4) For subregulations (2) and (3), the documents are:
  - (a) the aeroplane's flight and maintenance records; and
  - (b) each of the following documents, or copies of the documents:
    - (i) the aeroplane's certificate of registration;
    - (ii) the aeroplane's certificate of airworthiness (or, if applicable, special flight permit);
    - (iii) the current medical certificate for, and licence of, the pilot.

- (5) However, if the operations manual states that only a specified part of a document mentioned in subregulation (1) or paragraph (4)(a) must be carried during a flight, only that part need be carried.
- (6) A contravention of subregulation (1) or (2) is an offence of strict liability.

### **137.125 Manipulation of flight controls**

- (1) While an aeroplane is engaged in an application operation its flight controls may be manipulated by a person only if the person is:
  - (a) the pilot in command of the aeroplane; or
  - (b) a pilot who is being trained in application operations; or
  - (c) a person authorised to do so by CASA.

Penalty: 25 penalty units.

- (2) If an aeroplane engaged in an application operation is on the ground with the engine running, the pilot in command must be at the controls unless:
  - (a) the pilot is refuelling the aeroplane in accordance with the operations manual; or
  - (b) the following apply:
    - (i) the pilot remains near the aeroplane;
    - (ii) the wheel brakes are locked and, if practicable, the wheels are chocked;
    - (iii) the aeroplane's power controls are friction locked and, if possible, the propeller is feathered;
    - (iv) the engine is retarded to idle and, if possible, ground idle.

Penalty: 25 penalty units.

- (3) Subregulation (4) applies if a person who is not, under these Regulations, entitled to manipulate the aeroplane's flight controls:
  - (a) occupies a control seat fitted with fully or partially functioning controls; or
  - (b) is seated in a position where he or she could interfere with the controls.
- (4) The pilot in command of the aeroplane must:
  - (a) instruct the person not to interfere with the controls; and
  - (b) be satisfied on reasonable grounds that the person has understood the instruction.

Penalty: 25 penalty units.

- (5) A contravention of subregulation (1) or (2) is an offence of strict liability.
- (6) Strict liability applies to the physical element mentioned in paragraph (4)(a).

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### **137.130 Use of seats, seatbelts and harnesses**

- (1) A person in an aeroplane engaged in an application operation must occupy a seat and wear a seatbelt or harness whenever the aeroplane is moving under its own power.

Penalty: 10 penalty units.

- (2) However, subregulation (1) does not apply to a person in the aeroplane if, during the operation:
- (a) he or she is acting in accordance with an instruction by the pilot in command; or
  - (b) he or she is wearing an approved restraint device and either:
    - (i) has satisfactorily completed a course of training in the operation and is directly involved in the operation; or
    - (ii) is being trained in the operation.

- (3) A contravention of subregulation (1) is an offence of strict liability.

### **137.135 Carriage of passengers**

- (1) If an aeroplane is engaged in an application operation, neither the operator nor the pilot in command may allow a passenger to be carried unless subregulation (2), (3) or (4) applies to the operation and the passenger.

Penalty: 50 penalty units.

- (2) This subregulation applies if the passenger is an officer, or delegate of CASA, who is on board the aeroplane to carry out his or her duties.
- (3) This subregulation applies if:
- (a) the passenger is on board the aeroplane to identify the area where the application material is to be applied; and
  - (b) no application material is applied during the operation.
- (4) This subregulation applies if:
- (a) the passenger is on board the aeroplane to carry out duties necessary for his or her employment; and
  - (b) both the operator and the pilot agree to the carriage of the passenger.
- (5) A contravention of subregulation (1) is an offence of strict liability.

### **137.140 Minimum height and lateral separation for operation**

- (1) Subject to subregulations (2), (3) and (4) the pilot in command of an aeroplane engaged in an application operation may fly at any height while:
- (a) over the work area; or
  - (b) travelling from the landing area used for loading the aeroplane to the work area.



- (2) In a populous area, the aeroplane must not fly closer than 100 metres, measured horizontally, from an occupied building.  
Penalty: 25 penalty units.
- (3) In an area other than a populous area the aeroplane must not fly less than 350 feet AGL while closer than 100 metres, measured horizontally, from an occupied building.  
Penalty: 25 penalty units.
- (4) The aeroplane may fly closer to a building and to the ground than provided for in subregulation (2) or (3) if:
  - (a) more than 48 hours before the proposed operation, the occupier of the building was notified in writing about the operation and did not object to the operator about it; or
  - (b) if it was not reasonably practicable to give written notice—the occupier was notified verbally before the operation and did not object to the operator about it.
- (5) A contravention of subregulation (2) or (3) is an offence of strict liability.

### **137.145 Application over populous areas**

- (1) A person may conduct an application operation over a populous area only if:
  - (a) the person is an operator; and
  - (b) the procedures for the operation are set out in the operations manual; and
  - (c) the operation was requested by a person that, under a law of a State or Territory, may authorise the operation.  
Penalty: 25 penalty units.
- (2) An operator must, before conducting the operation, make a plan for the operation that:
  - (a) includes consultation with the person that requested the operation; and
  - (b) identifies any obstructions to flight and sets out how these will be avoided; and
  - (c) identifies the most suitable emergency landing area for the operation; and
  - (d) sets out any coordination with ATC that is necessary for the operation.  
Penalty: 25 penalty units.
- (3) A contravention of subregulation (1) or (2) is an offence of strict liability.

### **137.150 In-flight fuel management**

- (1) The pilot in command of an aeroplane engaged in an application operation must plan a flight for the operation so that, at all times, the aeroplane has enough fuel to complete the flight safely.  
  
Penalty: 50 penalty units.
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- (2) If an operations manual applies to the pilot, it must set out:
  - (a) the procedures that the pilot must follow to ensure that the aeroplane carries enough fuel; and
  - (b) a procedure to ensure that in-flight fuel checks and fuel management are carried out.
- (3) A contravention of subregulation (1) is an offence of strict liability.

### 137.160 Aerodrome circuit requirements

- (1) The pilot in command of an aeroplane engaged in an application operation that involves a take-off from, or landing at, an aerodrome need not conform with the circuit traffic protocol specified in the AIP for the aerodrome if:
  - (a) the aeroplane is fitted with a radio; and
  - (b) the pilot:
    - (i) maintains a continuous listening watch on the aerodrome frequency; and
    - (ii) broadcasts his or her intentions in accordance with the AIP; and
    - (iii) gives priority to other traffic.
- (2) However, subregulation (1) does not apply if the flight is subject to ATC instructions.
- (3) In this regulation, *AIP* includes a document that is equivalent to the AIP.

### 137.165 Close proximity operations

- (1) For this regulation, 2 or more aeroplanes are engaged in a **close proximity operation** if they are flying so close to each other during an application operation as to create a collision hazard if special measures are not taken.
- (2) A person must not operate an aeroplane in a close proximity operation if the person is not an operator.

Penalty: 25 penalty units.
- (3) The pilot in command of an aeroplane must not engage in a close proximity operation unless the operation is coordinated by:
  - (a) if the operation is to be conducted by 1 operator—the operator’s head of flight operations, or another person nominated by the operator; or
  - (b) otherwise—a suitably qualified pilot agreed to by all pilots involved in the operation.

Penalty: 25 penalty units.
- (4) The coordinator must give, to all pilots involved in the operation, instructions about the following:
  - (a) transit between the landing area and the work area;
  - (b) radio communications, including loss-of-communication procedures;

- (c) refuelling arrangements;
- (d) the conduct of the operation.

Penalty: 25 penalty units.

- (5) During the operation each pilot must:
  - (a) maintain safe lateral separation from the other aeroplanes by visual and radio contact; and
  - (b) comply with the instructions of the person coordinating the operation.

Penalty: 25 penalty units.

- (6) A contravention of subregulation (2), (3), (4) or (5) is an offence of strict liability.

### **137.170 Night operations**

- (1) This regulation applies to an application operation conducted at night.
- (2) The pilot in command of the aeroplane to be used in the operation must, by inspection during daylight, be familiar with:
  - (a) the work area; and
  - (b) the route between the work area and the landing area.

Penalty: 25 penalty units.

- (3) The operator of the aeroplane must plan the operation so the distance from a work area to a landing area is less than 30 minutes flying time at normal cruise power in still air, unless:
  - (a) the aeroplane is equipped, and certificated under Part 21, for night VFR flight; and
  - (b) the pilot holds, in addition to any rating required for night application operations, the rating required for a VFR flight at night.

Penalty: 25 penalty units.

- (4) The operator must not allow the operation to commence unless the aeroplane is equipped with a two-way radio that enables the pilot to communicate with each person on the ground who has a role in the operation.

Penalty: 25 penalty units.

- (5) The pilot must not commence or continue the operation if horizontal visibility from the aeroplane is less than 5 km.

Penalty: 25 penalty units.

- (6) The operator must ensure that lights are placed at the work area to help the pilot with orientation.

Penalty: 25 penalty units.

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- (7) A contravention of subregulation (2), (3), (4), (5) or (6) is an offence of strict liability.

**137.175 Firefighting operations**

- (1) A person must not operate an aeroplane for an application operation that involves firefighting unless the emergency control authority responsible for the firefighting:
- (a) has not, when the operation commences, taken control of the fighting of the fire; or
  - (b) has taken control of the firefighting and asks the person to carry out the operation.

Penalty: 50 penalty units.

- (2) A pilot is authorised to conduct an application operation that:
- (a) involves firefighting; and
  - (b) is requested by the relevant emergency control authority;
- only if he or she has more than 500 hours experience as pilot in command in application operations when the operation commences.

Penalty: 50 penalty units.

- (3) A contravention of subregulation (1) or (2) is an offence of strict liability.

## **Subpart 137.E—All-weather operations**

Note: Reserved for future use.

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## **Subpart 137.H—Aeroplane performance**

### **137.180 General**

- (1) The pilot in command of an aeroplane engaged in an application operation must, before take-off, take reasonable steps to satisfy himself or herself that the take-off can be safely carried out by considering the aeroplane's take-off weight and each other relevant factor.

Penalty: 50 penalty units.

- (2) Before landing, the pilot must satisfy himself or herself that the landing can be safely carried out by considering the aeroplane's landing weight and each other relevant factor.

Penalty: 50 penalty units.

- (3) A contravention of subregulation (1) or (2) is an offence of strict liability.

### **137.185 Take-off over a populous area**

- (1) The pilot in command of an aeroplane engaged in an application operation may commence a take off over a populous area only if the aeroplane's performance will allow it to be 200 feet or more AGL when it crosses the aerodrome boundary and climbing at 200 feet or more per minute.

Penalty: 50 penalty units.

- (2) A contravention of subregulation (1) is an offence of strict liability.

## Subpart 137.J—Weight and balance

### 137.190 Weight limitations

- (1) The pilot in command of an aeroplane engaged in an application operation must not commence a take-off if the aeroplane's gross weight exceeds:
  - (a) the maximum gross weight shown in the aeroplane's flight manual; or
  - (b) any maximum gross weight that:
    - (i) has been established for that type of aeroplane by a flight test supervised by CASA; and
    - (ii) is shown on a placard, approved by CASA and displayed in the aeroplane's cockpit; or
  - (c) the maximum gross weight shown on the type certificate, or type certificate data sheet, that is issued for the aeroplane by the national aviation authority of the State of Design (within the meaning given in Annex 8 to the Chicago Convention) of the aeroplane.

Penalty: 50 penalty units.

- (2) The pilot must calculate the take-off weight by a method that includes calculating the weight of:
  - (a) the crew and any equipment carried; and
  - (b) the aeroplane's fuel and load.

Penalty: 50 penalty units.

- (3) The operator of the aeroplane must not specify a minimum load to be carried by the aeroplane that is greater than the load that the pilot reasonably considers to be safe.

Penalty: 50 penalty units.

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

### 137.195 Loading—supervision

- (1) The pilot in command of an aeroplane to be used in an application operation must:
  - (a) supervise the loading of the aeroplane; and
  - (b) not commence the operation unless the load is placed in a way that is consistent with the data used for the calculation of the aeroplane's weight and balance.

Penalty: 25 penalty units.

- (2) A contravention of subregulation (1) is an offence of strict liability.

## Subpart 137.K—Instruments and equipment

### 137.200 Installation of instruments and equipment

- (1) Subject to subregulation (3), the operator of an aeroplane that is to be used in an application operation must ensure that instruments and items of equipment, other than role equipment, used in the aeroplane are:
  - (a) other than items mentioned in subregulation (3)—approved; and
  - (b) properly installed so they are fit for their purpose, and do not interfere with the operation of any other equipment; and
  - (c) except as provided in the applicable MEL—serviceable.

Penalty: 50 penalty units.

- (2) For paragraph (1)(b), an instrument or item of equipment is properly installed if:
  - (a) there is a Part 21 approval that covers the installation; and
  - (b) the instrument or item is installed in accordance with its approved design; and
  - (c) the instrument or item is compatible with the configuration of the aircraft; and
  - (d) the instrument or item is installed by a person who:
    - (i) has been trained to carry out the installation; and
    - (ii) is authorised, under these Regulations, to carry out the installation.
- (3) The following items are not required to be approved:
  - (a) electric torch;
  - (b) timepiece;
  - (c) a GPS marking system;
  - (d) chart holder;
  - (e) first-aid kit;
  - (f) survival and pyrotechnic signalling equipment.

- (4) A contravention of subregulation (1) is an offence of strict liability.

- (5) In this regulation:

***approved design***: see subregulation 42.015(1).

***Part 21 approval***: see subregulation 42.015(1).

### 137.210 Position of instruments and equipment

- (1) The operator of an aeroplane must not allow the aeroplane to be used in an application operation unless:



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- (a) equipment on the aeroplane that is operated during flight by only 1 crew member is installed so that it can readily be operated from the member's station; and
- (b) an instrument that need only be read by 1 crew member is installed:
  - (i) so the crew member can easily read the instrument from his or her station; and
  - (ii) as close as practicable to the crew member's line of vision in the direction of the flight path.

Penalty: 50 penalty units.

- (2) A contravention of subregulation (1) is an offence of strict liability.

**137.215 Instruments and equipment required**

- (1) The operator of an aeroplane must not allow the aeroplane to engage in an application operation unless it is fitted with the equipment mentioned in each item of Table 137.215-1.

Penalty: 50 penalty units.

**Table 137.215-1 Equipment for all application operations**

Item	Equipment
1	A magnetic compass
2	A timepiece showing the time in hours, minutes and seconds (unless the pilot in command carries such a timepiece)
3	A sensitive pressure altimeter that: <ul style="list-style-type: none"><li>(a) reads in feet; and</li><li>(b) has a sub-scale setting, calibrated in hectopascals, that can be set to any barometric pressure that may occur during flight</li></ul>
4	An airspeed indicator calibrated in knots
5	A slip indicator
6	An outside air temperature indicator calibrated in degrees Celsius
7	If the aeroplane is equipped with radio—a headset, whether or not built into a helmet, with a boom microphone or an equivalent microphone
8	Any other instruments and equipment required to be fitted for type certification.

- (2) The operator must not allow the aeroplane to engage in an application operation at night unless it is fitted with the equipment mentioned in each item of Table 137.215-2.

Penalty: 50 penalty units.

**Table 137.215-2 Equipment for night application operations**

Item	Equipment
1	At least 2 serviceable work lights that are suitable for the operation, installed so as

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**Table 137.215-2 Equipment for night application operations**

Item	Equipment
	to minimise glare in the cockpit
2	Navigation lights
3	An approved anti-collision lighting system
4	A system of cockpit lighting that is appropriate to the operation
5	Either: (a) a turn indicator; or (b) an attitude indicator that provides pitch and roll information at all attitudes

(3) A contravention of subregulation (1) or (2) is an offence of strict liability.

**137.220 Crew intercom system**

- (1) The operator of an aeroplane that requires a crew of more than 1 person must not allow it to engage in an application operation unless it is equipped with an intercom system that:
- (a) can be used by all members of the crew; and
  - (b) includes headsets, whether or not built into a helmet, and microphones that are not of a handheld type.

Penalty: 25 penalty units.

- (2) Subregulation (1) does not apply to the operation if:
- (a) the use of any item of intercom equipment may adversely affect the safety of the operation; and
  - (b) another appropriate method of communication between the crew is arranged before the operation commences.

(3) A contravention of subregulation (1) is an offence of strict liability.

**137.225 Seatbelts and harnesses**

- (1) This regulation applies to an aeroplane, other than an aeroplane that has been certified in the normal category.
- (2) The operator of the aeroplane must not allow it to engage in an application operation unless:
- (a) the pilot's seat is equipped with a four-point restraint harness with a single point release; and
  - (b) a harness or seatbelt for any other crew member is equipped with a single point release.

Penalty: 50 penalty units.

(3) A contravention of subregulation (2) is an offence of strict liability.

## **Subpart 137.M—Aeroplane maintenance**

### **137.230 Fitting and removal of role equipment**

- (1) A person must not fit role equipment to, or remove role equipment from, an aeroplane that is used in an application operation.

Penalty: 25 penalty units.

- (2) Subregulation (1) does not apply to a person who:
  - (a) has been trained by an operator, or an approved person, in the fitting and removal of a kind of role equipment; and
  - (b) fits or removes equipment of that kind.
- (3) A contravention of subregulation (1) is an offence of strict liability.

## Subpart 137.N—Pilots

### 137.235 Pilot in command must be authorised under Part 61

- (1) The operator of an aeroplane commits an offence if:
  - (a) the aeroplane is used to conduct an application operation; and
  - (b) the pilot in command of the aeroplane is not authorised under Part 61 to pilot the aeroplane in the operation.

Penalty: 50 penalty units.

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

### 137.240 Operator proficiency checks

- (1) For this regulation, a pilot holds a *valid operator proficiency check* if:
  - (a) he or she has satisfactorily completed a check that satisfies the criteria in subregulations (3), (4), (5) and (9); and
  - (b) under subregulations (7) and (8), the check is valid.

- (2) The operator of an aeroplane commits an offence if:
  - (a) the aeroplane is used to conduct an application operation; and
  - (b) the pilot in command of the aeroplane does not hold a valid operator proficiency check.

Penalty: 50 penalty units.

- (3) An operator proficiency check for a pilot who is employed by an operator must be conducted by:
  - (a) the operator's head of flight operations; or
  - (b) a flight examiner or instructor authorised under Part 61 to conduct application operations.
- (4) An operator proficiency check for the operator's head of flight operations must be conducted by an examiner or instructor mentioned in paragraph (3)(b).
- (5) Despite subregulations (3) and (4), an operator proficiency check for a pilot who, in the 12 months immediately before the check, has completed less than 50 hours flight time in application operations must be conducted by an examiner or instructor mentioned in paragraph (3)(b).
- (6) A synthetic flight trainer may be used for a check, or part of a check, if CASA approves its use for the purpose.
- (7) A check is valid for 12 months from the day on which the check is completed.

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- (8) However, if the check is completed less than 3 months before the day on which the check would otherwise expire (the *expiry day*), the check is valid for 12 months commencing at the end of the expiry day.
- (9) To complete an operator proficiency check the pilot must demonstrate that he or she is familiar with the systems, the normal and emergency flight manoeuvres, performance, fuel consumption rates, and weight and balance requirements for an aeroplane that he or she flies.

Note: A check of a pilot of a single seat aeroplane may be conducted by observation from the ground and may include review of GPS data logs, job planning and post flight records.

- (11) A contravention of subregulation (2) is an offence of strict liability.

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## **Subpart 137.P—Manuals, logs and records**

### **137.245 Flight manual**

- (1) An operator must maintain a current aircraft flight manual, or another approved document, for each aeroplane used by the operator for application operations.

Penalty: 25 penalty units.

- (2) A contravention of subregulation (1) is an offence of strict liability.

### **137.250 Checking records**

- (1) An operator must:
- (a) make a record of the checking that is:
    - (i) required, under Subpart 137.N, for each pilot employed by the operator; and
    - (ii) completed by each pilot; and
  - (b) allow each pilot to examine and copy the records that relate to him or her.

Penalty: 10 penalty units.

- (2) A contravention of subregulation (1) is an offence of strict liability.

Note: Records made for this regulation must be retained: see regulation 137.255.

### **137.255 Document retention periods**

- (1) The operator of an aeroplane that is used for application operations must keep an aircraft maintenance record relating to the aeroplane (including a record of the time in service of each component for which that information is kept):
- (a) for at least 90 days after the aeroplane concerned is in a condition that prevents it being flown in the future; and
  - (b) in a form that is suitable for, and allows access to, the information.

Penalty: 50 penalty units.

- (2) The operator of an aeroplane must keep each record mentioned in column 2 of an item in Table 137.255:
- (a) for at least the period mentioned in column 3 of the item; and
  - (b) in a form that is suitable for, and allows access to, the information.

Penalty: 25 penalty units.

- (3) A contravention of subregulation (1) or (2) is an offence of strict liability.

**Table 137.255**

<b>Item</b>	<b>Record</b>	<b>Period</b>
1	A copy of the following that relates to each pilot employed by the operator: (a) medical certificate; (b) licence; (c) any rating, endorsement or approval that is relevant to the pilot's employment by the operator	Until the pilot ceases to be employed as a pilot by the operator
2	The 2 most recent records of any training undertaken by a pilot employed by the operator if: (a) the training is required under the operations manual; and (b) the record is not retained for item 2	Until the pilot ceases to be employed as a pilot by the operator
3	A report about an event relating to the safety of an application operation made by a pilot employed by the operator	90 days from the day on which it is made
4	Pilot flight, duty and rest times	15 months from the day of the most recent entry in the document
5	Pilot conversion training	36 months from the day of the most recent entry in the document
6	Pilot recurrent training and annual proficiency check for Subpart 137.N	36 months from the day of the most recent entry in the document

**137.260 Maintenance record to be given to new operator**

- (1) A person that ceases to be the operator of an aeroplane that is used for application operations must, if another person becomes the operator, give the aeroplane's aircraft maintenance record, or a copy of the record, to the other person.

Penalty: 25 penalty units.

- (2) A contravention of subregulation (1) is an offence of strict liability.

## **Subpart 137.Q—Flight duty time limitations and rest requirements**

### **137.265 Application of Subpart 137.Q**

This Subpart sets out requirements about duty and rest times for a pilot who conducts application operations.

### **137.270 Subpart not to affect subsection 1 of CAO 48.1**

This Subpart does not affect the operation of subsection 1 of Civil Aviation Order 48.1.

### **137.275 Limit on flying hours**

- (1) The pilot must not fly more than:
  - (a) 1 200 hours in 365 consecutive days; or
  - (b) 170 hours in 28 consecutive days.

Penalty: 25 penalty units.

- (2) A contravention of subregulation (1) is an offence of strict liability.

### **137.280 Off-duty period before and after tour of duty**

- (1) Subject to subregulations (2) and (3), the pilot must not undertake duties relating to his or her employment by an operator, including being on call or planning less than:
  - (a) 8 hours before commencing a tour of duty; or
  - (b) 8 hours after completing a tour of duty of 10 hours or less; or
  - (c) 10 hours after completing a tour of duty of more than 10 hours.

Penalty: 25 penalty units.

- (2) No less than 8 hours after completing a tour of duty of more than 10 hours, the pilot may choose to recommence duty up to 1 hour earlier than the time required under paragraph (1)(c) if the pilot believes he or she is mentally and physically able to do so.
- (3) The pilot must not recommence duty under subregulation (2) if, in doing so, he or she would be in breach of regulation 137.275, 137.285, 137.290, 137.295 or 137.300.
- (4) A contravention of subregulation (1) is an offence of strict liability.



**137.285 Tour of duty—duration**

- (1) The pilot must not undertake, and a person must not require the pilot to undertake, a tour of duty that exceeds 14 hours.  
  
Penalty: 25 penalty units.
- (2) However, the pilot may extend a tour of duty in accordance with subregulation (3), (4) or (5) if:
  - (a) the pilot reasonably believes he or she is mentally and physically able to do so; and
  - (c) in doing so, the pilot would not be in breach of regulation 137.275, 137.280, 137.290, 137.295 or 137.300.
- (3) After the pilot has completed 14 hours of a tour of duty, he or she may extend the tour of duty by no more than 1 hour.
- (4) If, during a tour of duty, the pilot has had 3 or more consecutive hours of resting time, the pilot may extend the tour of duty by no more than the lesser of the following:
  - (a) 50% of the duration of the resting time;
  - (b) 2 hours.
- (5) If, during a tour of duty, the pilot has had 2 or more consecutive hours of sleeping time, the pilot may extend the tour of duty by no more than the lesser of the following:
  - (a) the duration of the sleeping time;
  - (b) 3 hours.
- (6) A contravention of subregulation (1) is an offence of strict liability.

**137.290 Off-duty period each 14 days**

- (1) In any 14 consecutive days the pilot must have a continuous period of at least 36 hours during which he or she carries out no duties for an operator.  
  
Penalty: 25 penalty units.
- (2) A person must not require the pilot to contravene subregulation (1).  
  
Penalty: 25 penalty units.
- (3) A contravention of subregulation (1) or (2) is an offence of strict liability.

**137.295 Limit on time spent on tours of duty**

- (1) The pilot must not spend more than:
  - (a) 44 hours on tours of duty in any 3 consecutive days; or
  - (b) 98 hours on tours of duty in any 7 consecutive days.  
Penalty: 25 penalty units.

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- (2) However, if:
- (a) the pilot has 1 or more periods of resting time during any of the days mentioned in subregulation (1); and
  - (b) each period is 6 or more continuous hours;
- the maximum amount of time for the subregulation is increased by 50% of the duration of the resting time (or the total of those resting times).
- (3) Despite subregulation (2), the maximum time for subregulation (1) is not increased if, in doing so, the pilot would be in breach of regulation 137.275, 137.280, 137.285, 137.290 or 137.300.
- (4) A person must not require the pilot to contravene subregulation (1).  
Penalty: 25 penalty units.
- (5) A contravention of subregulation (1) or (4) is an offence of strict liability.

### **137.300 Pilot to be fit for duty**

- (1) The pilot must not commence an application operation if he or she is not fit for duty.  
Penalty: 25 penalty units.
- (2) The operator of an aeroplane to be used in an application operation must not allow the pilot to commence the operation if the operator has reason to believe that the pilot is not fit for duty.  
Penalty: 25 penalty units.
- (3) For subregulations (1) and (2), a pilot is ***not fit for duty*** if, for example:
- (a) he or she has not had adequate rest, food or drink; or
  - (b) he or she is adversely affected by a medical condition or a psychoactive substance.
- Note: The expression ***psychoactive substances*** refers to alcohol, drugs and volatile solvents, but not coffee and tobacco: see clause 60 of Part 2 of the Dictionary.
- (4) In paragraph (3)(b):  
***medical*** includes psychological and psychiatric.
- (5) A contravention of subregulation (1) or (2) is an offence of strict liability.