



## **PART - 137**

CAA Consolidation

# **Agricultural Aircraft Operations**

## **DESCRIPTION**

Part 137 prescribes rules, that are additional to and exceptions from the general operating and flight rules prescribed in Part 91, for pilots performing or being trained to perform agricultural aircraft operations.

Part 137 also prescribes additional instrument and equipment requirements for aircraft conducting agricultural aircraft operations, as well as requirements for the certification and operation of persons performing commercial agricultural aircraft operations.

**This document is the current consolidated version of Part 137 produced by the Civil Aviation Authority, and serves as a reference only. It is compiled from the official ordinary rules that have been signed into law by the Minister of Road and Transport. Copies of the official rule and amendments as signed by Minister may be obtained from the Civil Aviation Authority or may be downloaded from the official web site at: [www.mcaa.gov.mn](http://www.mcaa.gov.mn)**

**Bulletin**

ICAO 29<sup>th</sup> Assembly Resolution A29-3 of year 1992 urges States to promote global harmonization of national rules.

In order to implement this Resolution, Mongolian Civil Aviation Regulation has been developed based on “Memorandum for Technical Cooperation” between CAA of Mongolia and New Zealand, signed on 6<sup>th</sup> of May, 1999.

**Amendment history****Effective Date**

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## **Part 137 Agricultural Aircraft Operations**

### **Subpart A - General**

#### **137.1. Purpose**

This Part prescribes-

- (1) rules additional to the general operating and flight rules in Part 91, for a pilot performing, or being trained to perform, an agricultural aircraft operation; and
- (2) exceptions from the general operating and flight rules in Part 91 for a pilot performing, or being trained to perform, an agricultural aircraft operation; and
- (3) rules governing the certification and operation of a person performing a commercial agricultural aircraft operation.

#### **137.3. Pilot qualifications**

(a) A pilot of an aircraft performing an agricultural aircraft operation for the purpose of aerial topdressing, aerial spraying, or aerial VTA must hold the current and appropriate agricultural ratings issued in accordance with Part 61.

(b) Despite paragraph (a), a pilot is not required to hold an agricultural rating if they are training for an agricultural, aerial topdressing, aerial spraying, or aerial VTA rating under the direct supervision of a holder of a category E flight instructor rating issued in accordance with Part 61.

#### **137.5. Requirement for certificate**

No person may perform a commercial agricultural aircraft operation except under the authority of, and in accordance with the provisions of, an agricultural aircraft operator certificate issued in accordance with Subpart D of this Part.

#### **137.7. Reserved**

#### **137.9. Accidents and incidents**

A person performing an agricultural aircraft operation who is involved in an accident or incident must notify the Director of the accident or incident in accordance with Part 12.

## Subpart B - Flight Rules

### 137.51. Purpose

This Subpart prescribes additional rules to, and exceptions from, the general operating and flight rules in Part 91, for a pilot performing, or being trained to perform, an agricultural aircraft operation.

### 137.53. Revoked

### 137.55. Direction of turns at aerodromes

A pilot performing, or being trained to perform, an agricultural aircraft operation may turn in a direction other than that prescribed in Part 91, when approaching for a landing at, or after take-off from, an aerodrome if-

- (1) the aerodrome is used solely for agricultural aircraft operations; or
- (2) the aerodrome displays the ground signal prescribed in Part 91 indicating that an agricultural aircraft operation is being conducted from that aerodrome.

### 137.57. Revoked

### 137.59. Revoked

### 137.61. Operations over congested areas

Notwithstanding Part 91, a pilot performing an agricultural aircraft operation over a congested area of a city, town, or settlement may, for the proper accomplishment of the operation, fly below the minimum height prescribed in Part 91 if-

- (1) the pilot performs the operation on behalf of a Government department; and
- (2) the pilot performs the operation in accordance with conditions and limitations prescribed by the Director; and
- (3) the pilot performs the operation under the authority of an agricultural aircraft operator certificate issued in accordance with this Part; and
- (4) the holder of the agricultural aircraft operator certificate has complied with 137.205.

**137.63. Operations over non-congested areas**

(a) Despite rule 91.311(a)(2), a pilot performing, or being trained to perform, an agricultural aircraft operation over any area other than a congested area of a city, town, or settlement, may fly at any height above the surface and at any distance from an obstruction if-

- (1) the pilot takes reasonable care to perform the operation without creating a hazard to any person or property on the surface; and
- (2) the height flown and the distance from any obstruction for an approach, turnaround, and departure is not less than that necessary for the effective and safe conduct of the operation.

(b) Despite rule 91.311(a)(2), a pilot performing, or being trained to perform, an agricultural aircraft operation over any area other than a congested area of a city, town, or settlement, may fly between a loading area and the associated treatment area, or between one treatment area and the next at a height less than that required by rule 91.311(a)(2) if-

- (1) the distance is less than 5 nautical miles; and
- (2) the pilot takes reasonable care to conduct the flight without creating a hazard to any person or property on the surface.

**137.65. Fuel reserves**

Notwithstanding Part 91, a pilot performing, or being trained to perform, an agricultural aircraft operation must ensure that the aircraft has the following minimum fuel reserves:

- (1) for aeroplanes, 30 minutes flight time;
- (2) for helicopters, 3 times the anticipated flight time or 30 minutes flight time, whichever is the lesser.



## Subpart C - Special Flight Rules

### 137.101. Purpose

This Subpart prescribes exceptions to the general operating and flight rules in Part 91 for a pilot performing, or being trained to perform, an agricultural aircraft operation in an aeroplane issued with a restricted category airworthiness certificate under Part 21 Subpart H for the purpose of an agricultural aircraft operation.

### 137.103. Maximum take-off weight

(a) Notwithstanding Part 91 and subject to paragraph (b), a pilot performing, or being trained to perform, an agricultural aircraft operation in an aeroplane must not take-off at a weight greater than the MCTOW prescribed in the aeroplane's flight manual unless-

- (1) the pilot complies with the procedures listed in Appendix B; and
- (2) the aeroplane is equipped with a jettison system that, in accordance with D.5, is capable of discharging not less than 80 percent of the aeroplane's maximum hopper load within five seconds of the pilot initiating the jettison action.

(b) Where there is a third party risk as defined in Appendix A, the pilot must determine the maximum take-off weight in accordance with 137.107 and 137.109.

### 137.105. Take-off distance and flight path - no third party risk

A pilot performing, or being trained to perform, an agricultural aircraft operation in an aeroplane where there is no third party risk as defined in Appendix A is not required to comply with the following:

- (1) the take-off distance specified in the aeroplane flight manual;
- (2) the take-off flight path gradient specified in the aeroplane flight manual.

### 137.107. Take-off distance - third party risk

(a) Subject to paragraph (b), a pilot performing, or being trained to perform, an agricultural aircraft operation in an aeroplane, where there is a third party risk as defined in Appendix A, must ensure that the take-off distance available (TODA) is greater than the take-off distance specified in the aeroplane flight manual multiplied by a factor of 1.2.

(b) When calculating the take-off distance, the pilot must take the following factors into account:

- (1) the weight of the aeroplane at the commencement of the take-off run;
- (2) the pressure altitude of the aerodrome;
- (3) the ambient temperature at the aerodrome;

- (4) the runway surface type and condition;
- (5) the runway slope in the direction of take-off;
- (6) not more than 50% of the head-wind component or not less than 150% of the tail-wind component.

#### **137.109. Take-off flight path - third party risk**

(a) Subject to paragraph (b), a pilot performing, or being trained to perform, an agricultural aircraft operation in an aeroplane where there is a third party risk as defined in Appendix A must ensure that the take-off flight path clears all obstacles by-

- (1) a vertical distance of at least 50 feet plus  $0.025D$ ; or
- (2) a lateral distance of at least 30 metres plus  $0.1D$ -

where  $D$  is the horizontal distance travelled by the aircraft from the end of the TODA.

(b) When calculating compliance with paragraph (a), the pilot must take the following factors into account:

- (1) the take-off flight path must begin at a height of 50 feet above the take-off surface at the end of the take-off distance required by 137.107 and end at a height of 500 feet above the take-off surface;
- (2) the aeroplane must not be banked at an angle exceeding 20 degrees;
- (3) obstacles which have a lateral distance greater than 150 metres from the planned flight path may be disregarded.

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## Subpart D - Commercial Operations - General

### 137.151. Application for certificate

An applicant for the grant of a commercial agricultural aircraft operator certificate must complete form CAA 24137/01 and submit it to the Director with a payment of the appropriate application fee.

### 137.153. Issue of certificate

An applicant is entitled to an agricultural aircraft operator certificate if the Director is satisfied that, in accordance with this Part-

- (1) the applicant has employed, or contracted a senior person identified as the chief executive who has the authority to ensure that all activities can be financed and carried out in accordance with this Part; and
- (2) the applicant has employed, or contracted a senior person or persons responsible to the chief executive who are responsible for-
  - (i) agricultural operations including flight operations and the ground support operations (chief pilot):
  - (ii) the system for safety management required under rule 137.155; and
- (2A) the senior persons referred to in paragraph (2) meet the qualifications, competency and experience requirements specified in Appendix C; and
- (3) the applicant and the senior persons required by paragraphs (1) and (2) are fit and proper persons; and
- (4) the granting of the certificate is not contrary to the interests of aviation safety.

### 137.155. Safety management

An applicant for an agricultural aircraft operator certificate must establish, implement, and maintain a system for safety management in accordance with rule 100.3.

### 137.157. Duration of certificate

- (a) An agricultural aircraft operator certificate may be granted or renewed for a period of up to 5 years.
- (b) An agricultural aircraft operator certificate remains in force until it expires or is suspended or revoked.
- (c) The holder of an agricultural aircraft operator certificate that expires or is revoked must immediately surrender the certificate to the Director.
- (d) The holder of an agricultural aircraft operator certificate that is suspended must immediately produce the certificate to the Director for appropriate endorsement.

**137.159. Renewal of certificate**

- (a) An application for the renewal of an agricultural aircraft operator certificate must be made on form CAA 24137/01.
- (b) The application must be submitted to the Director before the application renewal date specified on the certificate or if no such date is specified, not less than 60 days before the certificate expires.

**137.160. Agricultural aircraft operator safety management documentation**

- (a) An applicant for an agricultural aircraft operator certificate must provide the Director with a document containing-
  - (1) the following information relating to the system for safety management required by rule 137.155:
    - (i) all of the documentation required by rule 100.3(b):
    - (ii) for an applicant that is not applying for a renewal of an agricultural aircraft operator certificate, an implementation plan that describes how the system for safety management will be implemented; and
  - (2) the title, name, duties, and responsibilities of the senior person responsible for the system for safety management; and
  - (3) information that identifies the lines of safety responsibilities within the organisation.
- (b) The chief executive of the applicant's organisation must provide the Director with a statement signed by the chief executive on behalf of the organisation confirming that the information provided under paragraph (a)(1)-
  - (1) demonstrates the organisation's means and methods for ensuring ongoing compliance with Part 100; and
  - (2) is required to comply with Part 100.

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## Subpart E - Commercial Operations - Operating Requirements

### 137.201. Records

(a) The holder of an agricultural aircraft operator certificate must maintain accurate records at the certificate holder's principal place of operation of the following:

- (1) the name and address of each client;
- (2) the date of each agricultural aircraft operation;
- (3) the name and quantity of the material that is dispensed on each agricultural aircraft operation;
- (4) the name, address, flight crew licence number, and rating details of each pilot performing an agricultural aircraft operation;
- (5) the date each pilot was issued with their agricultural rating or the date of the last successful completion by each pilot of the annual competency check required in accordance with Part 61, whichever occurred later;
- (6) where applicable, the date each pilot was issued with their chemical rating or the date of the last successful completion by each pilot of the refresher course required in accordance with Part 61, whichever occurred later.

(b) The records required under paragraph (a) must be retained for a period of not less than 2 years from the date of completion of the operation.

### 137.203. Remote base operations

The holder of an agricultural aircraft operator certificate who performs a commercial agricultural aircraft operation for a period of 14 or more consecutive days from a base which is not the operator's principal place of operation must appoint a base pilot who-

- (1) holds a current agricultural rating; and
- (2) is responsible for the operations from that remote base; and
- (3) is responsible for arranging work rosters and maintaining records.

### 137.205. Operations over congested areas

(a) A holder of an agricultural aircraft operator certificate who intends to perform an agricultural aircraft operation over a congested area of a city, town, or settlement must-

- (1) in conjunction with, and for the briefing of every person and organisation involved in the operation, document a plan for the operation; and
- (2) ensure that every person and organisation involved in the operation is briefed on the plan that is required under paragraph (a)(1); and
- (3) give notice of the operation to the public by an effective means.

(b) The plan required under paragraph (a)(1) must contain-

- (1) information about any obstruction to flight; and

- (2) details of the emergency landing capability of the aircraft used; and
- (3) details of any co-ordination that may be necessary with the appropriate air traffic control service.

(c) A pilot-in-command of an aircraft performing an agricultural aircraft operation over a congested area of a city, town, or settlement, must comply with the plan that is required under paragraph (a)(1).

(d) The holder of the agricultural aircraft operator certificate must retain the plan required under paragraph (a)(1) for a period of at least 2 years from the date that the operation is completed.

### **137.207. Personnel requirements**

The holder of an agricultural aircraft operator certificate must employ, or contract the senior persons specified in 137.153(1) and (2).

### **137.209. Changes to operations**

A holder of an agricultural aircraft operator certificate must-

- (1) notify the Director in writing of any change that affects the currency of any information required by form CAA 24137/01; and
- (2) obtain prior acceptance from the Director before changing-
  - (i) the chief executive or any person referred to in rule 137.153(2):
  - (ii) the system for safety management, if the change is a material change.

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## Subpart F - Instruments and Equipment

### 137.251. Purpose

This Subpart prescribes the instruments and equipment required in addition to the Part 91 requirements for aircraft to be used for an agricultural aircraft operation performed under this Part.

### 137.253. General

No person may commence an agricultural aircraft operation unless-

- (1) the aircraft is equipped with the type and number of instruments and equipment required in accordance with Part 91 and this Subpart; and
- (2) the instruments and equipment installed in the aircraft comply with the relevant specifications and airworthiness design standards listed in-
  - (i) Appendix D to this Part; and
  - (ii) Appendix C to Part 21; and
  - (iii) Part 26; or
  - (iv) alternative specifications or standards acceptable to the Director; and
- (3) the instruments and equipment are installed in accordance with the aircraft manufacturer's instructions or other instructions acceptable to the Director; and
- (4) except as may be provided by a MEL approved under Part 91 for use for that aircraft, the instruments and equipment installed in the aircraft are in an operable condition.

### 137.255. Seating and restraints

The operator of an agricultural aircraft must ensure that the aircraft is equipped with a shoulder harness for each crew seat.

### 137.257. Additional instruments

The operator of an agricultural aircraft must ensure that the aircraft is equipped with a slip indicator.

### 137.259. Additional equipment

The operator of an agricultural aircraft must ensure that the aircraft is equipped with-

- (1) approved hoppers or spray tanks as applicable; and
- (2) a means of indicating to the pilot the upper level of the hopper contents; and

- (3) a jettison system for aeroplanes equipped with internal hoppers or spray tanks; and
- (4) applicable placarding in accordance with Appendix D including-
  - (i) hopper or spray tank maximum structural load as specified in the aircraft flight manual; and
  - (ii) passenger locations; and
  - (iii) flight limitations; and
  - (iv) jettison capability.

### **137.301. Transition for agricultural aircraft operator certificate holders and applicants**

- (a) This rule applies to each-
  - (1) holder of an agricultural aircraft operator certificate:
  - (2) applicant for the grant of an agricultural aircraft operator certificate.
- (b) Before the date for implementation set in accordance with subparagraph (e)(2), an organisation to which this rule applies is not required to comply with-
  - (1) rule 137.153(2)(ii):
  - (2) rule 137.155:
  - (3) rule 137.160(a)(1)(i):
  - (4) rule 137.160(a)(2):
  - (5) rule 137.160(a)(3):
  - (6) rule 137.160(b).
- (c) An agricultural aircraft operator certificate and an applicant for the grant of an agricultural aircraft operator certificate must submit a completed CAA form and implementation plan to the Director by 1 April 2021.
- (d) The implementation plan referred to in paragraph (c) must-
  - (1) include a proposed date for implementation of the system for safety management; and
  - (2) outline how the organisation plans to implement the system for safety management required under rule 137.155.
- (e) The Director will, if acceptable-
  - (1) approve the organisation's implementation plan; and
  - (2) set the date for implementation of the system for safety management.
- (f) In setting the date under subparagraph (e)(2), the Director must have regard to the following:
  - (1) the capability of the organisation:
  - (2) the complexity of the organisation:



- (3) the risks inherent in the activities of the organisation:
- (4) the date of any certificate renewal:
- (5) any resource or scheduling impacts on the organisation or the Authority or both:
- (6) the date for implementation must not be later than 1 February 2022.
- (g) A holder of an agricultural aircraft operator certificate does not have to submit an implementation plan with its certificate renewal application.
- (h) This rule expires on 1 February 2022.

## Appendix A - Third Party Risk

A third party risk exists where there is a third party, or property of a third party, within the take-off area prescribed in Figure 1.

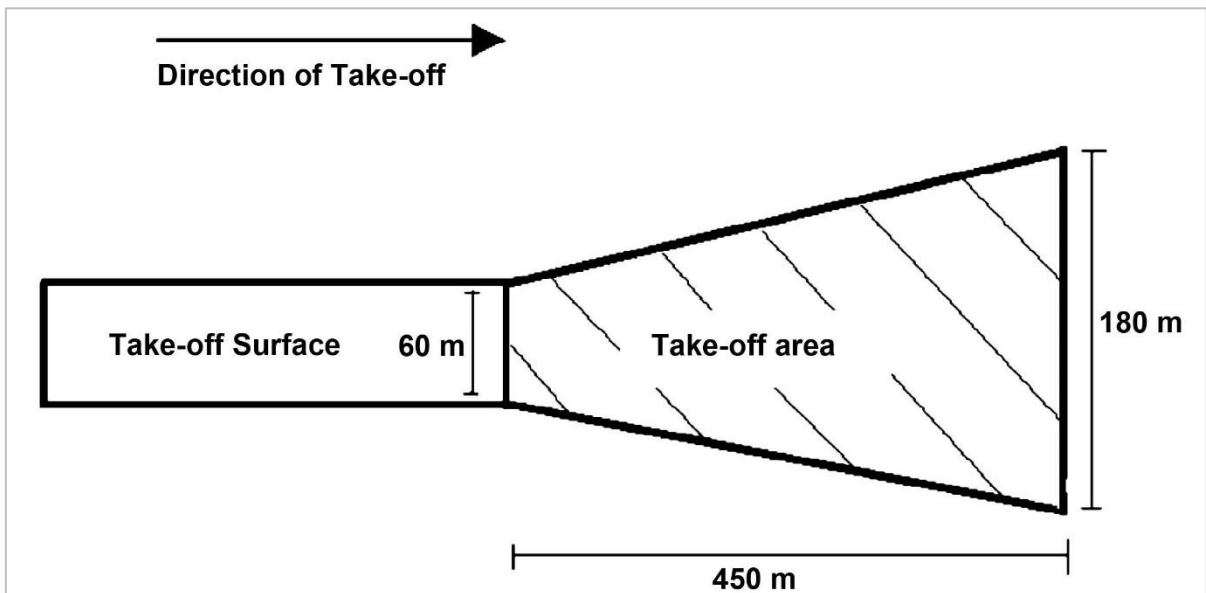


Figure 1.

## Appendix B - Overload Weight Determination

- (a) The pilot procedures required by 137.103(a) consist of-
- (1) finding the MCTOW in the aeroplane flight manual and the original aeroplane limit load factor; and
  - (2) locate the 'original aeroplane limit load factor' on the horizontal axis of figure 2, going vertically up to the reference line and then horizontally to the vertical axis to read the 'maximum recommended percentage weight increase'; and
  - (3) increasing the original category MCTOW by this percentage to find the new maximum take-off weight.

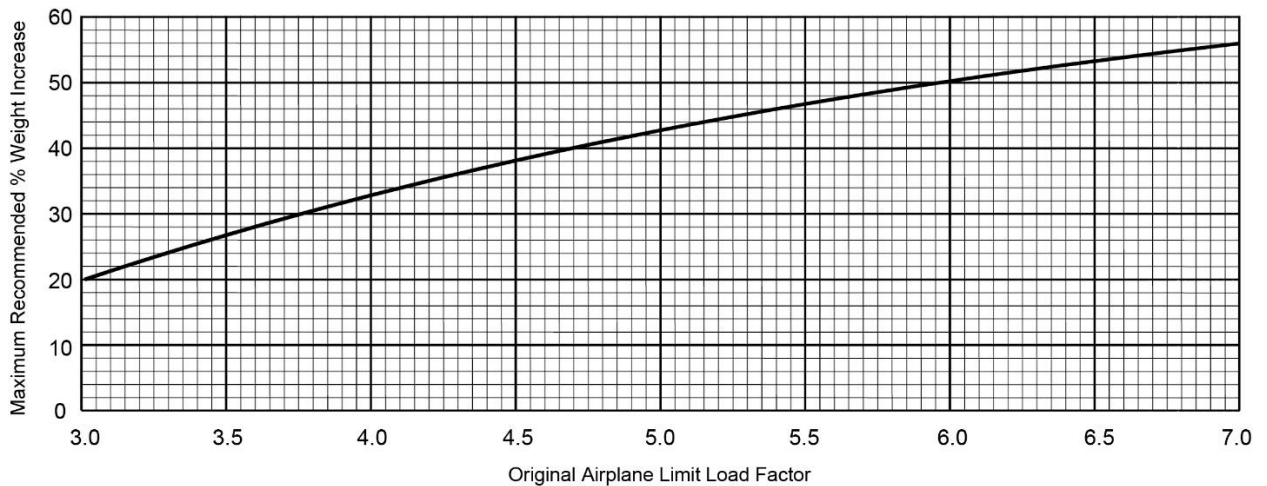


Figure 2.

- (b) When considering whether to operate up to this new maximum take-off weight, the pilot must take the following factors into account:
- (1) the pressure altitude of the aerodrome;
  - (2) the ambient temperature at the aerodrome;
  - (3) the runway surface type and condition;
  - (4) the runway slope in the direction of take-off;
  - (5) the head-wind or tail-wind component in the direction of the take-off;
  - (6) any other factors that may affect the performance of the operation.

## Appendix C

**Table C.1. Senior person responsible for agricultural operations (chief pilot)**

Document required	Has held, or holds a current grade 1 agricultural rating. Holds a current chemical rating if applicable.
Experience	Has practical experience acceptable to the Director appropriate for the type of operation being conducted.

**Table C.2. Senior person responsible for the system for safety management**

Competency	Demonstrate competency relevant to systems of safety management. A working knowledge of the applicable Civil Aviation Rules and safety management requirements.
Experience	Experience and background relevant to the management of safety systems and the activities of the organisation.

## Appendix D - Instruments and Equipment Airworthiness Design Standards

Instruments and equipment required by Subpart F must meet the following specifications and requirements:

### D.1. Seating and restraints

Seats and shoulder harnesses must be designed using an ultimate forward and resulting inertia force of 12g.

### D.2. Revoked

### D.3. Hoppers and spray tanks

(a) A hopper or spray tank and its support structure that is situated in such a position that it could injure an occupant if it came loose in a minor crash landing must be designed using an ultimate forward and resulting inertia force of 12g.

(b) A hopper or spray tank and its support structure that is situated in front of the crew must be designed using ultimate inertia forces of-

- (1) 1.5g rearwards; and
- (2) 1.0g sideways.

(c) For the purposes of paragraph (a) and (b), the hopper or spray tank must be assumed to be filled to the maximum load specified in the aircraft flight manual.

### D.4. Hopper upper level contents

Hoppers must be provided with a means for the pilot to detect the upper level of the contents, by indication or observation, for all loads in excess of half the maximum hopper load specified in the aircraft flight manual, allowing for the likely range of agricultural material densities to be carried.

### D.5. Jettison system

(a) A jettison system must be-

- (1) simple to operate; and
- (2) designed so that once the control is selected by the pilot the load will fully discharge without requiring the pilot to continue holding the control.

(b) The capability of the jettison system must be-

- (1) demonstrated by a flight test using-
  - (i) the maximum permitted load of Superphosphate specified in the flight manual; and

- (ii) when specialised role equipment is fitted, the maximum permitted load of the agricultural material typically used when that role equipment is fitted; and
- (2) specified in the aeroplane flight manual.

## **D.6. Markings and placards**

### **D.6.1. General**

- (a) Markings and placards must be displayed in a conspicuous place that may not be easily erased, disfigured, obscured, or removed.
- (b) Units used on markings and placards must be the same as those on the related instrument or in the related aircraft flight manual.

### **D.6.2. Hopper or spray tank maximum loadings**

A placard stating the maximum hopper or spray tank load must-

- (1) be located-
  - (i) adjacent to the hopper or tank filler; and
  - (ii) in full view of the normal loading positions; and
- (2) state a maximum load not exceeding the permitted maximum hopper load.

### **D.6.3. Jettison capability**

Agricultural aeroplanes equipped with a jettison system in accordance with 137.259(3) must have a placard with the following wording displayed in the cockpit and in view of the pilot:

#### **CAUTION**

***The jettison capability of this aeroplane may differ depending on the aeroplane configuration and the type and condition of the material to be dispensed.***

### **D.6.4. Passenger locations**

For each passenger position not readily visible from the outside of an aircraft, the exterior must be marked on both sides of the fuselage adjacent to the passenger position with the following diagram:

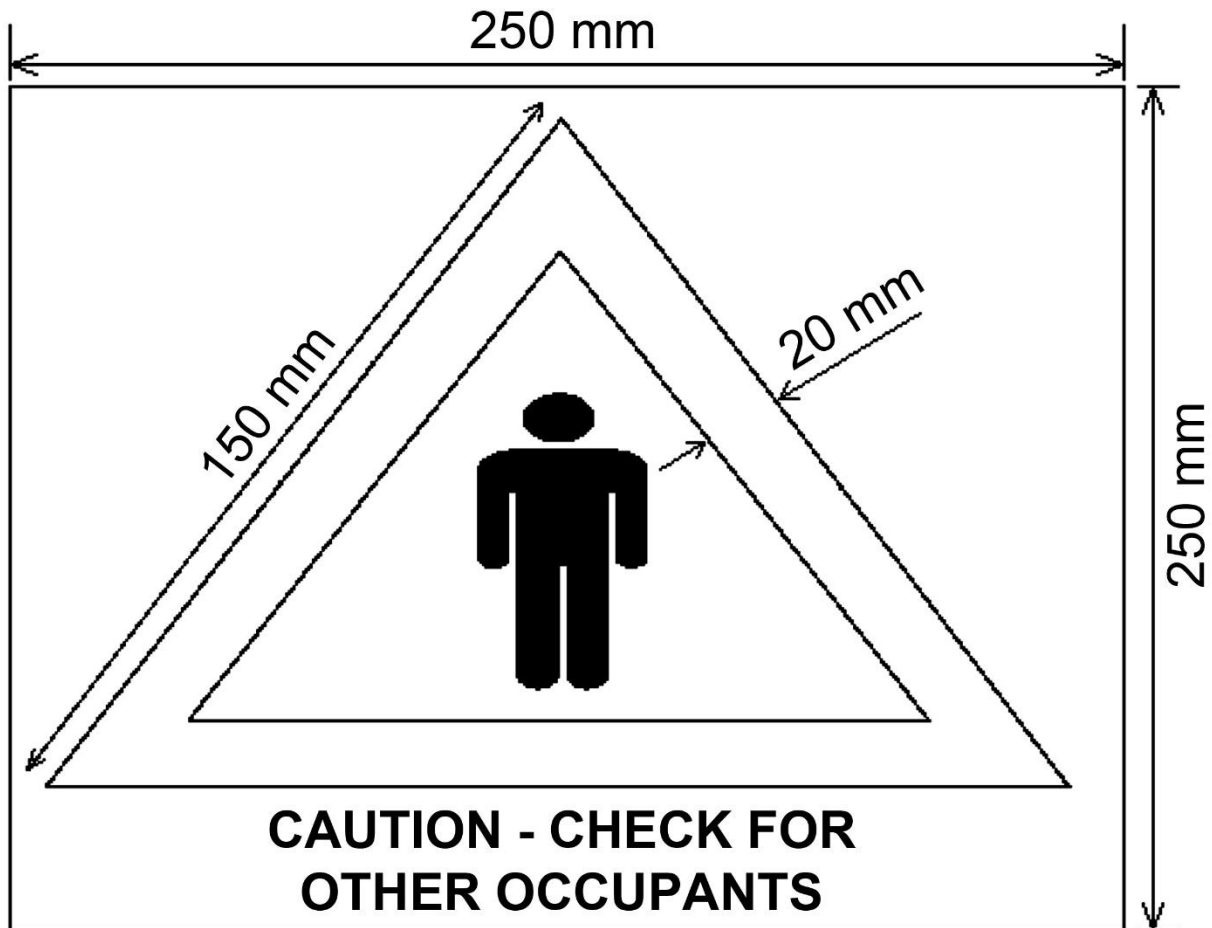


Figure 3. A black figure within a red triangle on a white background.

**D.6.5. Aeroplane flight limitations**

(a) A placard or placards with the following wording must be displayed in the cockpit of an agricultural aeroplane and in view of the pilot:

**WARNING**

***Operation of this aeroplane above the MCTOW requires a minimum jettison capability of at least 80% of the maximum permitted load within 5 seconds for the configuration being used.***

**CAUTION**

***This is an agricultural aeroplane. All aerobatic manoeuvres, including spins, prohibited. Avoid severe flight manoeuvres.***

--oOo--