



# Australian Government

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## Civil Aviation Safety Authority

I, PHILIPPA JILLIAN SPENCE, Director of Aviation Safety, on behalf of CASA, make this instrument under regulations 138.020 and 201.025 of the *Civil Aviation Safety Regulations 1998* and section 4 of the *Acts Interpretation Act 1901*.

**[Signed P. Spence]**

Pip Spence  
Director of Aviation Safety

23 November 2021

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### Part 138 MOS Amendment Instrument 2021 (No. 1)

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**1 Name of instrument**

This instrument is the *Part 138 MOS Amendment Instrument 2021 (No. 1)*.

*Note* MOS is short for Manual of Standards.

**2 Commencement**

This instrument commences on 2 December 2021, immediately after the commencement of the *Civil Aviation Safety Amendment (Part 138) Regulations 2018*.

**3 Amendment of Part 138 Manual of Standards**

Schedule 1 amends the *Part 138 (Aerial Work Operations) Manual of Standards 2020*.

### Schedule 1 Amendments

**[1] After section 1.03**

*insert*

**1.03A References to instruments and documents**

- (1) In this MOS, unless a contrary intention appears, a reference to an instrument or any other document (however described) is a reference to the instrument or document, as in force or existing from time to time.
- (2) In this MOS, unless a contrary intention appears, a reference to any legislative instrument is a reference to the instrument, as in force from time to time.
- (3) In this MOS, unless a contrary intention appears, a reference to a FAR is a reference to the FAR, as in force from time to time.
- (4) If a provision of this MOS applies, adopts or incorporates any instrument or other document, then, unless a contrary intention appears, the instrument or other document, is taken to have been applied, adopted or incorporated as in force or existing from time to time.

*Note 1* This section applies to an AFM (which includes an AFM Supplement) because it is also a document.

*Note 2* A reference to an instrument or other document, which only occurs in a Note to a provision, does not have the effect that the instrument or document is taken to be applied, adopted or incorporated for this MOS, unless a contrary intention appears. Such references in Notes are to documents which may be used as guidance or background information.

### **1.03B References to ICAO documents**

- (1) In this MOS, unless a contrary intention appears, a reference to an ICAO document (however described) is a reference to the document, as in force or existing from time to time.
- (2) In this MOS, unless a contrary intention appears, a reference to a numbered ICAO Annex is a reference to the Annex of that number, as in force or existing from time to time, and as contained in the Chicago Convention.
- (3) In this MOS, unless a contrary intention appears, a reference to a numbered ICAO manual is a reference to the manual of that number, or subsequent version, as in force or existing from time to time and issued by ICAO.
- (4) In this MOS, unless a contrary intention appears, a reference to a numbered ICAO circular is a reference to the circular of that number, or subsequent version, as in force or existing from time to time and issued by ICAO.

*Note 1* Relevant ICAO documents for this MOS may be accessed by navigating from the following link: <http://www.icao.int/publications/Pages/default.aspx>.

*Note 2* A reference to an ICAO document, including an ICAO Annex, which only occurs in a Note to a provision, does not have the effect that the document is taken to be applied, adopted or incorporated for this MOS, unless a contrary intention appears. Such references in Notes are to documents which may be used as guidance or background information.

### **1.03C References to AS/NZS standards, TSOs, ETSOs, (E)TSOs**

- (1) In this MOS, unless a contrary intention appears, a reference to a particular AS/NZS standard is a reference to the particular joint Australian and New Zealand Standard, as in force or existing from time to time.

*Note* For example, the joint Australian and New Zealand Standard AS/NZS 1754:2004, *Child restraint systems for use in motor vehicles*.

- (2) In this MOS, unless a contrary intention appears, a reference to a particular TSO is a reference to that TSO or a later version of that TSO.
- (3) In this MOS, unless a contrary intention appears, a reference to a particular ETSO is a reference to that ETSO or a later version of that ETSO.
- (4) In this MOS, unless a contrary intention appears, a reference to a particular (E)TSO is a reference to the relevant ETSO or TSO, or a later version of the relevant ETSO or TSO.

*Note 1* The first versions of a TSO may have been issued with or without the notation “(0)” at the end (for example only, citations of TSO-C129 and TSO-129(0) would refer to the same document). Thus, for first version TSOs, either form is an acceptable citation for the other.

*Note 2* TSO later versions are identified by an alphabetical letter (for example only, TSO-C129 (or TSO-C129(0) versus TSO-C129a). Unless the contrary intention appears, a reference to (for example only) TSO-C129 (or TSO-C129(0)) means that version or a later version. A reference to TSO-C129a means that version or a later version, but not the earlier version — unless a contrary intention appears.

## **[2] Section 1.04, definition of *significant change***

*omit*

138.017

*insert*

138.012

**[3] Subsection 1.07 (1), definition of *rescue operation*, or *rescue***

*repeal and substitute*

***rescue operation***, or ***rescue***, means an aerial work operation:

- (a) that is:
  - (i) tasked and coordinated by a search and rescue body; or
  - (ii) self-tasked by an authority mentioned in section 3.03, and coordinated by a search and rescue body; and
- (b) the primary purpose of which is to:
  - (i) retrieve persons who are, or are likely to be, in distress; and
  - (ii) provide for their initial survival and other needs; and
  - (iii) deliver them to a place of safety.

**[4] Subsection 1.07 (1), definition of *search operation*, or *search***

*repeal and substitute*

***search operation***, or ***search***, means an aerial work operation:

- (a) that is:
  - (i) tasked and coordinated by a search and rescue body; or
  - (ii) self-tasked by an authority mentioned in section 3.03, and coordinated by a search and rescue body; and
- (b) the primary purpose of which is to locate persons who are, or who are likely to be, lost and in distress.

**[5] Section 3.01**

*omit*

: RESERVED

*insert*

, namely, the flight of an aircraft that is towing a thing, where the pilot in command of the aircraft meets the requirement mentioned in paragraph 91.210 (2) (a).

**[6] Paragraph 4.02 (1) (c)**

*repeal and substitute*

- (c) an operation for the purposes of training and checking air crew members under Chapter 24 of this MOS;
- (d) an operation using a multi-engine rotorcraft with MTOW above 3 175 kg that is type certificated in the restricted category;
- (e) an operation that is an NVIS operation.

**[6A] Section 7.03**

*repeal and substitute*

**7.03 Requirements for prescribed single-engine aeroplane (PSEA)**

- (1) Subject to subsection (2), for regulation 138.020, aerial work operations may be conducted in a PSEA of a kind prescribed by paragraph 8.03 (b) of the Part 135 MOS.

*Note* Under paragraph 8.03 (b) of the Part 135 MOS, the aeroplane's type acceptance certificate must state the relevant eligibility to be a PSEA.

- (2) The following aerial work operations may be conducted in a PSEA only if the operator's operations manual includes the procedures for PSEA operations that are specified in Chapter 8 of the Part 135 MOS for the purposes of subregulation 135.240 (3) of CASR:
- (a) an operation for the carriage of 4 or more aerial work passengers mentioned in, and in accordance with, paragraph 11.02 (1) (b) of this MOS;
  - (b) an operation for the carriage of 4 or more aerial work passengers mentioned in, and in accordance with, paragraph 11.04 (1) (b) of this MOS.

**[7] Subparagraph 9.05 (c) (i)**

*omit*

serviceable

**[8] Subparagraph 9.05 (c) (ii), the Note**

*repeal and substitute*

*Note 1* It is recommended that rotorcraft be fitted with a usage monitoring system sooner, where this is feasible.

*Note 2* For the requirements relating to operative and inoperative equipment — see section 22.05. For the technical requirements for a usage monitoring system — see section 22.06.

**[9] After paragraph 9.05 (e)**

*insert*

*Note* The reference in paragraph (e) to a rotorcraft that must be fitted with a “secondary or redundant means” has the effect of including a rotorcraft whose flight manual indicates that the throttle may be used to attempt to control engine RPM during emergencies such as a governor failure.

**[10] Paragraph 9.06 (1) (c), Note 2**

*omit*

Division 4

*insert*

Division 5

**[11] Paragraph 9.06 (1) (c), Note 3**

*omit*

Division 4

*insert*

Division 5

**[12] Paragraph 9.16 (3) (a)**

*omit*

serviceable

**[13] Paragraph 9.16 (3) (a), the Note**

*repeal and substitute*

*Note 1* See section 1.04 for the definition of *transition mode capability*.

*Note 2* For the requirements relating to operative and inoperative equipment — see section 22.05.

**[14] Subsection 9.20 (3)**

*repeal and substitute*

- (3) The flight must be discontinued immediately if there is a malfunction in the AFCS, unless the AFM permits the continued use of the auto-hover with transition mode capability despite the malfunction.

**[15] Chapter 9, Division 6, the heading**

*repeal and substitute*

**Division 6 Aircraft flight over populous areas and public gatherings**

**[16] After section 11.06**

*insert*

**11.07 Carriage of 1 or more aerial work passengers over water**

- (1) For subparagraph 138.305 (2) (c) (iv), 1 or more suitable forced landing areas must be available and usable by the rotorcraft at all stages of the flight with passengers conducted over water.

*Note* Subsections 1.06 (2), (3) and (4) specify the requirements relating to suitable forced landing areas that are areas of water. Among other requirements, if the rotorcraft does not have a type certificate or supplemental type certificate for landing on water, the rotorcraft must be equipped with an emergency flotation system.

**[17] Paragraph 13.04 (3) (c)**

*omit*

performance class, if applicable

*insert*

performance

**[18] Section 14.02**

*repeal and substitute*

- (1) For subregulation 138.375 (1), each FCM must wear a seatbelt when stationed at the FCM's crew station.

*Note* For *crew station*, see the CASR Dictionary.

- (2) Subject to subsections (3) and (4), for subregulation 138.375 (1), a seatbelt must be worn by each person on an aircraft during an aerial work operation whenever any of the following occurs:
- (a) the aircraft flies below 1 000 ft AGL;
  - (b) the aircraft flies above 1 000 ft AGL and the pilot in command directs that a seatbelt must be worn;
  - (c) the aircraft is on the ground and the pilot in command directs that a seatbelt must be worn.

- (3) For subregulation 138.375 (1), for an operation in which a person in a class of persons mentioned in section 15.02 is carried as an external load, the operator and the pilot in command must each ensure that the following requirements are complied with:
- (a) for an aerial work passenger who is being rescued in an SAR operation — a rescue harness, or other rescue device compliant with the requirements of, or approved under, Part 21 of CASR, must be worn as instructed or fitted by a crew member;
  - (b) the rescue harness or other rescue device mentioned in paragraph (a) must be used:
    - (i) strictly in accordance with the instructions for its use; and
    - (ii) only in the rescue situations for which it was designed to be used.
- (4) Subsections (2) and (3) do not apply for a Class D external load operation that involves a person exiting or entering an aircraft in flight using a rope or ladder attached to the rotorcraft (rappelling), provided that the requirements of subsection 15.06 (6) are complied with.

*Note* See subsection 15.06 (6): the operation must be an ESO conducted by trained ESO personnel, or ESO personnel training.

**[19] Section 15.03**

*repeal and substitute*

**15.03 RESERVED**

**[20] Paragraph 15.06 (4) (a)**

*repeal*

**[21] Paragraph 15.06 (5) (a)**

*omit*

(4) (a) to (c)

*insert*

(4) (b) and (c)

**[22] Subsection 15.08 (4)**

*omit*

Division 4

*insert*

Division 5

**[23] Subsection 17.02 (1)**

*omit*

below 500 ft AGL

*insert*

below 500 ft AGL in a rotorcraft

**[24] After paragraph 17.02 (2) (a)**

*insert*

*Note* The categories of aircraft that are also rotorcraft are helicopter, powered-lift aircraft and gyroplane. Regulation 138.205 requires aircraft used in aerial work operations to be type certificated in the normal, commuter, or transport category if an aerial passenger is carried; and in the normal, commuter, transport, restricted or utility category if such a passenger is not carried. This rule may preclude a category of aircraft from being used in aerial work operations if the relevant type certificate is not available.

**[25] Paragraph 17.02 (2) (b)**

*omit*

aircraft (twice occurring)

*insert*

rotorcraft

**[26] Paragraph 17.02 (2) (c)**

*omit*

an aircraft

*insert*

a rotorcraft

**[27] Paragraph 17.02 (2) (c)**

*omit*

the category of aircraft

*insert*

the class of rotorcraft

**[28] Paragraph 17.02 (3) (a)**

*omit*

the category and type of aircraft

*insert*

the class of rotorcraft

**[29] Paragraph 17.02 (3) (a)**

*omit*

(the *relevant aircraft*)

*insert*

(the *relevant rotorcraft*)

**[30] Paragraph 17.02 (3) (b)**

*omit*

the relevant aircraft

*insert*

the relevant rotorcraft

**[31] Subsection 17.07 (9)**

*omit*

An aerial work operation

*insert*

Subject to subsection (10), an aerial work operation

**[32] After subsection 17.07 (9)**

*insert*

- (10) Subsection (9) does not apply to an aerial work operation if:
- (a) the operation involves the discharge of a firearm from an aircraft (***shooting***) by a shooter for the purpose of the humane killing of an animal that is injured or being culled (the ***proposed operation***); and
  - (b) the shooter is engaged by an ***aerial shooting organisation*** for the proposed operation; and
  - (c) the aerial work operator has a procedure in its operations manual for compliance with Chapter 13 in relation to the proposed operation; and
  - (d) the aerial shooting organisation complies with the requirements in subsection (11).
- (11) For the proposed operation, the aerial shooting organisation must:
- (a) have an aerial shooting safety management plan (an ***ASSMP***); and
  - (b) use the ASSMP to create a specific ***aerial shooting plan***; and
  - (c) provide the relevant sections of the ASSMP and the aerial shooting plan to the following:
    - (i) the shooter;
    - (ii) the aerial work operator, and the pilot in command of the operation;
    - (iii) the person who occupies (or, if not occupied, who exercises control over) the land over which the shooting will occur (the ***person affected***); and
  - (d) brief the aerial work operator and the pilot in command on the shooting plan; and
  - (e) obtain, and retain for at least 12 months, the aerial work operator's written agreement that:
    - (i) the risks have been assessed under Chapter 13; and
    - (ii) the risk criteria under section 13.02 are satisfied; and
  - (f) ensure that the person affected has no objections to the proposed operation or the aerial shooting plan.

*Note* Any failure to comply with the requirements of this subsection and the risk mitigators in the aerial shooting plan will raise the risk profile of the operation for the aircraft, the crew and third parties, and result in the operation being in breach of subsection (9).

- (12) In this section:
- aerial shooting organisation*** means a person whose business activity is the humane shooting of animals from the air for the purposes of culling or euthanasia.

*Note* An aerial shooting organisation may be a self-employed shooter, or a corporation that engages shooters, or an aerial work operator that conducts aerial shooting.

***aerial shooting plan***, for a proposed operation, means a plan, specific to the nature and location of the proposed operation, and promptly available to CASA on written



request to the operator or the aerial shooting organisation, that identifies and, as far as practicable, mitigates the following that may arise from the proposed operation:

- (a) specific hazards to human life and property, both in the air and on the ground;  
and
- (b) the risk of inhumane outcomes for animals.

***aerial shooting safety management plan (ASSMP)*** means a plan, promptly available to CASA on written request to the operator or the aerial shooting organisation, setting out the standard operating procedures of an aerial shooting organisation for the planning, risk assessment, risk mitigation, conduct, WHS compliance, and overall safety of an operation for the humane shooting of an animal from the air.

***WHS*** is short for workplace health and safety and means the laws for these purposes applicable in a location.

**[33] Paragraph 17.09 (1) (b)**

*omit*

operated

*insert*

conducted at night

**[34] Paragraph 17.09 (3) (b)**

*omit*

a serviceable autopilot

*insert*

an autopilot

**[35] After paragraph 17.09 (3) (b)**

*insert*

*Note* See section 22.05 for the requirements relating to operative and inoperative equipment.

**[36] After subsection 17.09 (3)**

*insert*

- (4) With effect from the beginning of 2 December 2023, a single-engine rotorcraft must be equipped with a usage monitoring system.

*Note* See section 22.06 for the requirements of a usage monitoring system.

**[37] Paragraph 18.04 (a)**

*omit*

the requirements specified in Chapter 11 of the Part 133 MOS;

*insert*

the requirements for PC1, PC2 or PC2WE (as applicable) specified in Chapter 10 of the Part 133 MOS;

**[38] Paragraph 18.04 (c)**

*omit*

the requirements specified in Chapter 4 of the Part 133 MOS;

*insert*

the requirements relating to PC3 specified in Chapter 10 of the Part 133 MOS;

**[39] Subsection 22.03 (3)**

*omit*

aeroplane

*insert*

aircraft

**[40] Subsection 22.03 (3)**

*omit*

aeroplane's

*insert*

aircraft's

**[41] Paragraph 22.03 (4) (b)**

*omit*

aeroplane

*insert*

aircraft

**[42] Section 22.05**

*repeal and substitute*

**22.05 Serviceability of equipment**

Any equipment required by this MOS to be fitted to, or carried on, an aircraft for a flight must be operative unless:

- (a) another provision of the civil aviation legislation provides otherwise; or

*Note 1* 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 MOS, to be unserviceable within the limits of the requirements contained in this MOS. An example from the Part 91 MOS is that section 26.26 of that MOS 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 applicable civil aviation legislation.

*Note 2* For **civil aviation legislation**, see section 3 of the *Civil Aviation Act 1988*.

- (b) the equipment:

- (i) is inoperative because of a defect that has been approved as a permissible unserviceability for the aircraft for the flight in accordance with regulation 21.007 of CASR; and

- (ii) is fitted or carried in accordance with the permissible unserviceability.

**[43] Section 22.06, the heading**

*repeal and substitute*

**22.06 Usage monitoring system requirements**

**[44] Subsection 22.06 (1)**

*repeal and substitute*

- (1) This section applies to a rotorcraft conducting an aerial work operation if it is required by the civil aviation legislation to be fitted with a usage monitoring system.

**[45] Subsection 22.06 (2), the Note**

*repeal*

**[46] Subsection 22.08 (2)**

*omit*

For subregulation 138.465 (2), the aircraft

*insert*

The aircraft

**[47] Paragraph 23.02 (3) (a)**

*omit*

a competency check

*insert*

a general emergency competency check

**[48] Subsection 23.02 (4)**

*omit*

a competency check

*insert*

a general emergency competency check

**[49] Subsection 23.02 (4)**

*omit*

operator proficiency check

*insert*

general emergency competency check

**[50] Subsection 23.03 (4)**

*omit*

23.05 (2)

*insert*

23.05 (3)

**[51] Paragraph 23.05 (2) (a)**

*omit*

operator competency check

*insert*

general emergency competency check

**[52] Paragraph 23.05 (2) (a)**

*omit*

23.02 (1)

*insert*

23.02 (2)

**[53] After subsection 23.05 (2)**

*insert*

- (2A) Despite subsection (2), the recurrent training and checking for the general emergency training matters mentioned in paragraphs 23.02 (2) (e) and (f) does not need to include in-water practical training and checking, except for the training and checking in underwater escape.

**[54] Subsection 23.05 (4)**

*omit*

proficiency

*insert*

competency or proficiency

**[55] Subsection 23.05 (5)**

*omit*

proficiency

*insert*

competency or proficiency

**[56] Section 23.06**

*omit*

operator proficiency check (thrice occurring)

*insert*

operator proficiency check or general emergency competency check

**[57] Paragraph 23.10 (1) (b)**

*repeal and substitute*

- (b) an individual who is authorised by Part 61 to conduct the training or competency assessment; or
- (c) for the purposes of general emergency training and competency assessment — an individual who:

- (i) has met the training and assessment requirements set out in the operator's operations manual for a relevant trainer or checker for the general emergency training or competency assessment (as applicable); and
- (ii) is nominated in writing by the operator to conduct the general emergency training or competency assessment, or both, for the operator.

**[58] Subsection 23.10 (3)**

*omit*

For paragraph (2) (d),

*insert*

For subparagraph (1) (c) (ii) and paragraph (2) (d),

**[59] Subsection 23.10 (3)**

*omit*

paragraphs (2) (a), (b) and (c) (as applicable).

*insert*

subparagraph (1) (c) (ii), or paragraphs (2) (a), (b) and (c), as applicable.

**[60] Subsection 23.11 (1)**

*repeal and substitute*

- (1) This section is for subparagraph 23.10 (1) (c) (ii) and paragraph 23.10 (2) (d).

**[61] Section 24.02**

*repeal and substitute*

For subregulation 138.540 (3), sections 23.02, 23.03, 23.05 and 23.06 apply to the operator for an air crew member as if:

- (a) references in those sections to an FCM were references to an air crew member; and
  - (b) paragraph 23.05 (3) (b) applies to operations conducted under the VFR and the IFR; and
  - (c) paragraph 23.05 (3) (c) does not apply.
-