



Australian Government

Civil Aviation Safety Authority

Part 138 (Aerial Work Operations) Manual of Standards 2020

I, SHANE PATRICK CARMODY, 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 S. Carmody]

Shane Carmody
Director of Aviation Safety

29 October 2020

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Note This Table of Contents is for guidance only. It is not a formal part of the *Part 138 (Aerial Work Operations) Manual of Standards 2020*. See subsection 1.01 (4).

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Part 138 (Aerial Work Operations) Manual of Standards 2020

CHAPTER 1 PRELIMINARY AND DEFINITIONS

Division 1 Preliminary

1.01 Name of instrument

- (1) This instrument is the *Part 138 (Aerial Work Operations) Manual of Standards 2020*.
- (2) This instrument may be cited as the Part 138 MOS.
- (3) Unless the contrary intention appears, references in this instrument to “the MOS” or “this MOS” are references to the Part 138 MOS.
- (4) The Table of Contents at the front of this MOS is not part of this instrument. It is for guidance only and may be modified or edited in any published version of this instrument.

1.02 Commencement

This instrument commences immediately after the commencement of Part 138 of CASR.

Note 1 Part 138 of CASR is contained in the *Civil Aviation Safety Amendment (Part 138) Regulations 2018* which commences on 2 December 2021.

Note 2 Some provisions have a date of effect which is later than the date of commencement of this MOS — see paragraph 9.05 (c) and subsection 22.06 (1).

1.03 Application

- (1) Consistent with subregulations 138.005 (3) and (4) and 138.030 (1), the provisions of this MOS apply only to an operator who is an aerial work certificate holder, unless the provision is expressed to apply to an operator in an aerial work operation whether or not the operator is such a holder.
- (2) In this MOS, a provision is taken to be expressed to apply to an operator in an aerial work operation whether or not the operator is an aerial work certificate holder if the provision is expressed to apply to:
 - (a) an aerial work certificate holder; and
 - (b) a limited aerial work operator.

Note See the definitions of a **limited aerial work operator** and **limited aerial work operation** in subsection 1.04 (6).

- (3) Despite subsections (1) and (2), the definitions in this MOS, and the prescriptions for definitions, apply within this MOS as required by the provisions of this MOS.

Division 2 Definitions — general

1.04 Definitions etc.

- (1) In this instrument words and phrases have the same meaning as in Part 138 of CASR and in the *Civil Aviation Act 1988* unless a contrary intention appears.
- (2) In this MOS, unless a contrary intention appears, mention of a provision with the prefix “91.” or “138.” is a reference to that provision in Part 91 or Part 138 of CASR.

- (3) In this instrument, a reference to an emergency services operation (an **ESO**) is a reference to an aerial work operation that is part of an ESO.
- (4) In this instrument, unless a contrary intention appears, mention of anything that must be in accordance with procedures (however described) in an operations manual is to be taken as requiring the operations manual to contain the procedures as if they had been prescribed for regulation 138.020.

Note Operations manual procedures may be in the form of procedures, instructions, requirements, specifications, operational criteria, restrictions and similar matters. It is an offence not to comply with relevant operations manual requirements.

- (5) In this instrument, a reference to any document that is applied, adopted or incorporated is a reference to the document as it exists or is in force from time to time, unless a contrary intention is expressly stated by the reference being to a specifically dated version of the document.
- (6) In this MOS:

aerial work cargo means things (but not persons) carried on an aircraft in an aerial work operation:

- (a) that are not carried as an external load operation; and
- (b) whose carriage is the purpose of, or required for carrying out the purpose of, the operation.

aerial work certificate holder is the expression that is used in this MOS to denote an **aerial work operator**.

aerial work operation has the meaning given by regulation 138.010.

aerial work operator has the meaning given by Part 1 of the CASR Dictionary.

Note A aerial work operator is defined in the CASR Dictionary as a person holding an aerial work certificate (an **aerial work certificate holder**). Only aerial work certificate holders are permitted to carry **aerial work passengers** as defined in the CASR Dictionary. See also Chapter 2.

aerial work passenger has the meaning given by Part 1 of the CASR Dictionary.

Note An aerial work passenger is a specific subset of the general definition of **passenger** in the CASR dictionary. Only **aerial work passengers** may be carried in an aerial work operation and only on an aerial work certificate holder's aircraft.

aerial work zone, or **AWZ**, has the meaning given by section 1.05.

AFCS means automatic flight control system.

AFM means aircraft flight manual.

air crew member has the meaning given by Part 1 of the CASR Dictionary.

approved cargo rack means a cargo rack whose fitment and use on a rotorcraft has been approved for the carriage of aerial work cargo by:

- (a) an STC for the rotorcraft; or
- (b) an approved engineering order under Subpart 21.M of CASR, designed for fitment and use of the cargo rack on the rotorcraft.

authorised weather forecast has the meaning given by Part 1 of the CASR Dictionary.

automatic flight control system is a system which integrates the functionality of the autopilot, the flight director, the flight management and navigation system and other systems fitted to an aircraft.

avoid area of the HV envelope, for a rotorcraft, means the combinations of altitude and airspeed displayed on the height-velocity diagram in the AFM

which have been determined by the OEM as not offering safe autorotational landing capability, or OEI accountability, in the event of engine failure.

AWZ-RA means a risk assessment for an AWZ.

belly hook means a hook that:

- (a) is attached to the underside of a rotorcraft in accordance with the AFM; and
- (b) if a Class D external load is carried — either:
 - (i) is certified by its manufacturer for the carriage of such a load; or
 - (ii) complies with the standard approved in writing by CASA for the carriage of such a load.

Note For example, CASA may approve a standard so that a belly hook may be used for a Class D external load where there is a supplementary type certificate (STC) for a change to the rotorcraft made by someone other than the original equipment manufacturer (OEM).

CAO means Civil Aviation Order.

CAO 82.6 means *Civil Aviation Order 82.6 (Night vision imaging system — helicopters) 2007*.

CAR means the *Civil Aviation Regulations 1988*.

CASR means the *Civil Aviation Safety Regulations 1998*.

CASR Dictionary means the Dictionary under regulation 1.004 of CASR.

category of aircraft: see regulation 61.010 of CASR.

Class A external load means a load that is not a person, carried by a rotorcraft in an external load operation (which under this MOS is called a Class A external load operation) that:

- (a) is external to the rotorcraft; and
- (b) is not carried in an approved cargo rack, or in a sealed receptacle; and
- (c) is not jettisonable; and
- (d) cannot move freely; and
- (e) does not extend below the rotorcraft's landing gear.

Note An example of an operation involving a Class A external load is when a load is carried on a platform from which the load has the potential to fall off if it is not properly secured. See the definition of **sealed receptacle** which means a belly tank for firefighting, or a cargo pod, basket, bin, or similar thing in which a load can be fully enclosed and sealed.

Class B external load means a load that is not a person, carried by a rotorcraft in an external load operation (which under this MOS is called a Class B external load operation) that is:

- (a) external to the rotorcraft; and
- (b) jettisonable; and
- (c) carried above or below the rotorcraft's landing gear; and
- (d) by using the rotorcraft's belly hook or winch:
 - (i) lifted off land or water, or off a structure that is on land or water; and
 - (ii) carried in flight; and
 - (iii) set down on land or water, or on a structure that is on land or water.

Note An example of an operation involving a Class B external load is the picking up and carriage, using a sling attached to the belly hook of a rotorcraft, of an air-conditioning unit that is then set down on the roof of a tall building.

Class C external load means a load that is not a person, carried by a rotorcraft in an external load operation (which under this MOS is called a Class C external load operation):

- (a) that is external to the rotorcraft; and
- (b) that is jettisonable; and
- (c) part of which remains in contact with land or water during the lifting.

Note An example of an operation involving a Class C external load is powerline stringing.

Class D external load means a load that is a person, carried external to the rotorcraft, by a rotorcraft in an external load operation (which under this MOS is called a Class D external load operation).

Note Examples of operations involving a Class D external load are the following: winching a person on board from land or water; winching a person already aboard onto land or into the water; positioning a person on or at a transmission wire using a fixed line attached to the rotorcraft's belly hook; carrying a person on a platform; conducting a person's hover exit from, or entry to, the rotorcraft. The belly hook, winch, hard point, or platform must be approved for the purpose of the lifting, placement or carrying of the person (see for example, subsection 15.06 (4)). Only an aerial work certificate holder may carry out a Class D external load operation — see generally subregulations 138.005 (3) and 138.030 (1).

Class E external load means a load, carried by an aeroplane in an external load operation (which under this MOS is called a Class E external load operation) that is:

- (a) external to the aeroplane; and
- (b) jettisonable; and
- (c) either:
 - (i) attached to the exterior of the aeroplane; or
 - (ii) picked up, towed, and released by, the aeroplane.

Note 1 An example of an operation involving a Class E external load is a banner towing operation by an aeroplane.

Note 2 Glider towing is excluded from the definition of **aerial work operation** by paragraph 138.010 (5) (c). Therefore, a glider that is towed by an aeroplane is not a Class E load.

cloud seeding, for a dispensing operation, means the dropping of approved substances from an aeroplane flying through, or above, cloud formations, for the purpose of causing precipitation from the clouds.

emergency service operation has the meaning given by Part 1 of the CASR Dictionary.

ESO means an aerial work operation that is part of an emergency service operation.

Note **Emergency service operation** is defined in the CASR Dictionary.

ESO operating site means:

- (a) a location on ground or water, on a vessel, or on an offshore facility, at or from which an aircraft lands or takes off for the purposes of an ESO, or for training for an ESO; or
- (b) a position in the air at which a rotorcraft hovers for carrying out an aerial work operation as part of an ESO or training for an ESO.

Note ESO operating sites are places where an aerial work objective is actually carried out, for example, a clearing or reserve adjacent to a relevant incident site, on to which, or from which, a rotorcraft lands or takes off, or over which it hovers in an ESO external load operation, for the purpose of facilitating a SAR or police operation. ESO operating sites do not include, for

example, an aerodrome that is the operator's normal base, or a hospital or other location which is served by a purpose-built heliport.

external load means a load that is external to an aircraft.

Note An external load is not cargo.

external load operation has the meaning given by regulation 138.010 (2).

Note 1 An **external load operation** means carrying or towing a load outside an aircraft in flight and includes training for such an operation.

Note 2 An external load operation is not a cargo transport operation.

FATO means final approach and take-off area, as that expression is defined in the CASR Dictionary.

FCM means a flight crew member.

FD means flight director.

flight director means a system within the AFCS, which overlays the attitude indicator, and whose purpose is to compute and indicate the aircraft attitude required to attain and maintain a preselected flight condition for a particular flight trajectory.

FMS means flight management system, and is an aircraft's on-board multi-purpose navigation, performance and aircraft operations computer.

GNSS means the global navigation satellite system.

head of operations, for an aerial work certificate holder, has the same meaning as in subparagraph (b) (ii) of the definition of **key personnel** in the CASR Dictionary.

HLS means helicopter landing site.

IFR means instrument flight rules.

ISA means international standard atmosphere.

key personnel, for an aerial work certificate holder, has the same meaning as in paragraph (b) of the definition of **key personnel** in the CASR Dictionary.

Note Refer to the CASR Dictionary. Generally, relevant key personnel are the chief executive officer, the head of operations, the head of training and checking (if required under CASR Part 138), and the safety manager (if required under CASR Part 138).

kind, of an aircraft, has the meaning given by Part 1 of the CASR Dictionary.

limited aerial work operation means an aerial work operation:

- (a) that is described in subregulation 138.030 (2); and
- (b) for which the operator is not required by subregulation 138.030 (1) to be an aerial work certificate holder.

Note The effect of this definition is that a limited aerial work operation is either or both of the following:

- (a) spotting or photography where no remuneration is received by any of the following for the operation:
 - (i) the pilot;
 - (ii) for a registered aircraft — the registered operator;
 - (iii) for an unregistered aircraft — the aircraft owner;
 - (iv) a person or organisation on whose behalf the operation is conducted;
- (b) an operation that is:
 - (i) for a registered aircraft — conducted over land owned or occupied by the registered operator; and
 - (ii) otherwise — conducted over land owned or occupied by the aircraft owner; and

- (iii) not conducted over a populous area or public gathering; and
- (iv) not an external load operation involving the carriage of a person as an external load.

limited aerial work operator means an operator who conducts a limited aerial work operation.

load, in the expression **external load**, means anyone or anything that is picked-up, carried and set-down by an aircraft during an external load operation.

Note A load is not cargo.

LSALT means lowest safe altitude.

MEL means minimum equipment list.

minimum equipment list has the meaning given by Part 1 of the CASR Dictionary.

minimum flight altitude, for a point on the route, or a route segment, of a flight of a rotorcraft, means:

- (a) for an IFR flight or a VFR flight at night:
 - (i) the published LSALT for the route or route segment; or
 - (ii) if subparagraph (i) does not apply — the LSALT for the route or route segment; or
- (b) for a VFR flight at night when not using the LSALT determined under paragraph (a) — 1 000 ft above the highest obstacle on the ground or water within 10 NM ahead of, and to either side of, the aircraft at that point; or
- (c) for a VFR flight by day over a populous area — 1 000 ft above the highest feature or obstacle within a horizontal radius of 300 metres of that point on the ground or water immediately below the rotorcraft; or
- (d) for a VFR flight by day other than over a populous area — 500 ft above the highest feature or obstacle within a horizontal radius of 300 metres of that point on the ground or water immediately below the rotorcraft.

minimum height means the applicable height under the following regulations:

- (a) for a flight over a populous area or a public gathering — regulation 91.265;
- (b) for a flight over other than a populous area or a public gathering — regulation 91.267;
- (c) for a VFR flight at night — regulation 91.277;
- (d) for an IFR flight — regulation 91.305.

MOS means Manual of Standards.

MTOW means maximum take-off weight.

MTOW HOG means maximum take-off weight hover out of ground effect.

navigation system has the same meaning as in the CASR Dictionary.

NM means nautical miles.

NVIS means night vision imaging system.

NVIS operation has the same meaning as in CAO 82.6.

NVIS qualified crew means a crew that is qualified for NVIS operations in accordance with Part 61 of CASR, and CAO 82.6, as applicable.

OEI, for a rotorcraft, means one engine inoperative.

OEI accountability, for the flight of a multi-engine rotorcraft, means:

- (a) operating in accordance with a performance class of PC2WE or higher performance class as described in the Part 133 MOS; or
- (b) during the take-off, take-off and initial climb, en route, and approach and landing and baulked landing, phases of a flight, as applicable, doing all of the following:
 - (i) operating in accordance with the requirements of the rotorcraft's AFM Category A performance supplement;
 - (ii) remaining clear of obstacles;
 - (iii) using en route performance to fly to a suitable OEI landing area at or above the minimum height for the flight: or
- (c) operating OEI with the capability to do all of the following:
 - (i) remain clear of obstacles; and
 - (ii) reach a suitable forced landing area; and
 - (iii) conduct a landing using the power available in the remaining engine within its operating limits.

OEI accountability, for the flight of a single-engine rotorcraft, means:

- (a) operating in accordance with a performance class of PC3 as defined by the Part 133 MOS; or
- (b) operating by day in VMC in accordance with the requirements of the rotorcraft's AFM and with the capability to:
 - (i) remain clear of obstacles; and
 - (ii) reach a suitable forced landing area; and
 - (iii) conduct a forced landing into the area without causing a hazard to persons or property on the ground in the area; or
- (c) operating at night in VMC using NVIS and able to comply with the requirements mentioned in paragraph (b) as if they applied.

offshore facility has the same meaning as in the *Maritime Transport and Offshore Facilities Act 2003*.

offshore surveillance operation means a surveillance operation that is conducted over the sea.

Part 91 MOS has the meaning given by Part 1 of the CASR Dictionary.

Part 121 MOS has the meaning given by Part 1 of the CASR Dictionary.

Part 133 MOS has the meaning given by Part 1 of the CASR Dictionary.

Part 142 operator has the meaning given by Part 1 of the CASR Dictionary.

performance class, or **PC**, means a class of performance capability of a rotorcraft and has the same meaning as in the Part 133 MOS.

positioning flight means:

- (a) a flight of an aircraft to position aerial work cargo, or an aerial work passenger, in order to prepare for and carry out an aerial work operation; and
- (b) a flight to reposition or remove aerial work cargo or an aerial work passenger on completion or cancellation of an aerial work operation, or of that part of the operation, to which a positioning flight related.

prescribed single-engine aeroplane has the meaning given by Part 1 of the CASR Dictionary.

PSEA means a prescribed single-engine aeroplane.

Note A single-engine aeroplane is a **prescribed single-engine aeroplane** if it is of a kind prescribed by the Part 135 MOS for the purposes of subregulation 135.240 (3) of CASR.

radio navigation system means equipment carried on, or installed in, an aircraft for the purpose of navigating the aircraft by reference to the signals emitted by a radio navigation aid.

RAIM means receiver autonomous integrity monitoring for GNSS.

restricted person has the meaning given by Part 1 of the CASR Dictionary.

Note The CASR Dictionary defines a **restricted person** as one of the following:

- (a) a deportee (within the meaning of subsection 5 (1) of the *Migration Act 1958*);
- (b) a removee (within the meaning of subsection 5 (1) of the *Migration Act 1958*);
- (c) a person in custody;
- (d) a passenger [that is, an aerial work passenger] carried on an aircraft:
 - (i) on the aircraft because they have been refused entry to a country; or
 - (ii) whose passport does not include a visa required for entry to the passenger's destination country.

risk assessor means:

- (a) the pilot in command of an aircraft in an aerial work operation; or
- (b) another person, mentioned in the operator's operations manual, who is:
 - (i) qualified to conduct the type of aerial work operation for which the person prepares a pre-flight assessment; or
 - (ii) appointed in writing by the operator to prepare risk assessments in accordance with the applicable provisions of Chapter 13.

Note If the risk assessor is not the pilot in command, the operations manual must identify the risk assessor, for example, by name, role or title.

SAR means search and rescue.

Note For related definitions of **SAR operation**, **search**, **rescue**, **search and rescue body**, see section 1.07.

sea means the waters extending from the coastline of Australia in a seawards direction.

Note **Sea** includes tidal estuaries but does not include inland rivers, lakes, reservoirs, dams, or other similar bodies of water.

sealed receptacle means a belly tank for firefighting, or a cargo pod, basket, bin or similar thing, that:

- (a) is a sealed container within which aerial work cargo, water or fire retardant is fully enclosed; and
- (b) is fixed to the exterior of a rotorcraft in accordance with the rotorcraft's AFM supplement.

significant change has the same meaning as in regulation 138.017.

STC means supplementary type certificate.

standard rate turn means a turn of approximately 3 degrees per second, or 360 degrees in 2 minutes.

suitable forced landing area has the meaning given by section 1.06.

surveillance operation means an operation to look for, identify or monitor a person or thing.

task specialist has the meaning given by regulation 138.015.

time-in-service has the meaning given by Part 1 of the CASR Dictionary.

training endorsement: see the CASR Dictionary.

transition mode capability means the capability, through the AFCS, to do the following:

- (a) hover hold at a selected height above the surface;
- (b) ground speed hold;
- (c) transition down and hover to a waypoint under guidance from the navigation function of the FMS (the **navigation computer**);
- (d) transition down and hover near a target over which the helicopter has flown;
- (e) transition up, climb, and capture a cruise height;
- (f) capture and track search patterns generated by the navigation computer;
- (g) monitor the preselected hover height with the option of automatic correction if the aircraft height drops below the safe minimum height.

type has the meaning given by Part 1 of the CASR Dictionary.

vertical reference operation is an external load operation:

- (a) in which a rotorcraft picks up, carries and sets down a load; and
- (b) during which the pilot, by looking down vertically from the rotorcraft, is able to observe the position of the load.

Note These operations are sometimes colloquially known as “long-lining” — the load at the end of its long-line below the rotorcraft is always within a vertical line of sight to the pilot in the rotorcraft. The pilot must be able to look down and observe the position of the load so that the pilot can alternately scan the load, the flight controls, the instruments and the rotorcraft’s position.

vessel means any on-water craft or structure capable of navigation.

VMC has the meaning given by Part 1 of the CASR Dictionary.

V_{mini} means instrument flight minimum speed, utilised in complying with minimum speed limit requirements for instrument flight in a rotorcraft.

water rescue operation means:

- (a) an external load operation in a rotorcraft to rescue a person from the sea or other water, using rescue equipment attached to an AFM-approved external load attachment point on the rotorcraft, whether or not the attachment hook is certified by its manufacturer for the carriage of a Class D external load; or
 - (b) training for an operation mentioned in paragraph (a).
- (7) In this MOS, without affecting any other requirement of this MOS, any mention of a pilot or a pilot in command for any particular aerial work operation means a pilot who is qualified under Part 61 of CASR to conduct the particular aerial work operation.

Division 3 Definitions — AWZ

1.05 Aerial work zone (AWZ)

- (1) Subject to subsection (3), an **aerial work zone** (an **AWZ**) means the area of land or water:
 - (a) beneath an aerial work operation in which:
 - (i) an aircraft is flown below the height, and closer than the distance, specified in paragraph 91.265 (2) (a) or (3) (a); and
 - (ii) none of the circumstances mentioned in subregulation 91.265 (4) applies; and
 - (b) within which there are, or are likely to be, one or more of the following:
 - (i) buildings, other than a building involved in the operation;
 - (ii) persons, other than persons involved in the operation (**participants**);
 - (iii) vehicles or vessels, other than the vehicles or vessels of participants;
 - (iv) livestock not associated with the operation; and
 - (c) where one or more of the following events might occur:
 - (i) a collision between the aircraft and a building, or between the aircraft and terrain;
 - (ii) the falling of any load from the aircraft; and
 - (d) where, if an event mentioned in paragraph (c) were to occur, there would be a reasonable risk of:
 - (i) serious injury or death to a person in the area (other than the pilot or a participant); or
 - (ii) serious damage or injury to a building, vehicle, vessel or livestock in the AWZ (other than a building on which, or from which, a load is to be placed or removed, or the vehicle or vessel of a participant).

Note The fact of an operation occurring above an area may attract persons, some in vehicles or vessels, to enter the area as spectators unless they are properly prohibited. Such an area may then become an AWZ requiring such persons and vehicles or vessels to be properly prohibited from entering.

- (2) For this instrument, an area may be an AWZ despite the fact that a person has total control over who may enter, or be in, the area.

Note For example, the presence of contiguous or adjacent buildings not involved in the operation may make an area an AWZ despite the fact that the person for whom the operation is being carried out otherwise has total control over who may enter or be in the area of the building that is involved in the operation.

- (3) If an area beneath an aerial work operation is not an AWZ but, in the event of an emergency or a mechanical failure, the reasonably likely trajectory of an aircraft or its external load would be over the area, then the area beneath the aerial work operation is also an AWZ.

Division 4 Definition of **suitable forced landing area**

1.06 Suitable forced landing area

Area of ground

- (1) In this MOS, an area of ground is a **suitable forced landing area** for a flight of a rotorcraft in an aerial work operation if the rotorcraft could make a forced

landing in the area with a reasonable expectation that there would be no injuries to persons in the rotorcraft or on the ground.

Areas of water

- (2) In this MOS, an area of water that meets the requirements mentioned in subsection (3) is a ***suitable forced landing area*** for a flight of a rotorcraft in an aerial work operation if the rotorcraft:
 - (a) is equipped with emergency flotation equipment; or
 - (b) has a type certificate or supplemental type certificate for landing on water.
- (3) For subsection (2), and subject to subsection (4), the requirements are the following:
 - (a) the rotorcraft must be able to ditch in the area of water with a reasonable expectation that there would be no injuries to persons in the rotorcraft or on the water;
 - (b) there must be a reasonable expectation that persons in the rotorcraft would survive in the area of water for the time that it would take to be rescued;
 - (c) if an aerial work passenger is carried — the area of water must be:
 - (i) adjacent to land; or
 - (ii) adjacent to an offshore installation with search and rescue capabilities; or
 - (iii) in a location mentioned in the operations manual of an aerial work operator with search and rescue capabilities.
- (4) Factors that affect whether there is a reasonable expectation about the matters mentioned in paragraphs (3) (a) and (b) include the following:
 - (a) the surface condition of the area of water, including the wave height, wind conditions and swell;
 - (b) the limits of the capability of the rotorcraft's emergency flotation system to keep the rotorcraft upright and floating in certain sea conditions.

Division 5 Definition of SAR, search, and rescue

Note A ***medical transport operation*** does not fall within any of the definitions in this Division, and none of the operations in this Division is a medical transport operation.

1.07 SAR, search and rescue

- (1) In this MOS:

rescue operation, or ***rescue***, means an aerial work operation, tasked and coordinated by a search and rescue body, or self-tasked and coordinated by an ESO, the primary purpose of which is to:

 - (a) retrieve persons who are, or are likely to be, in distress; and
 - (b) provide for their initial survival and other needs; and
 - (c) deliver them to a place of safety.

SAR operation has the same meaning as ***search and rescue operation***.

search operation, or ***search***, means an aerial work operation, tasked and coordinated by a search and rescue body, or self-tasked and coordinated by an ESO, the primary purpose of which is to locate persons who are, or who are likely to be, lost and in distress.

search and rescue body has the meaning given by Part 1 of the CASR Dictionary.

Note A search and rescue body means any of the following:

- (a) a State or Territory police service or the Australian Federal Police;
- (b) the Australian Defence Force;
- (c) the Australian Maritime Safety Authority.

search and rescue operation means an aerial work operation whose primary purpose is a combined search and rescue.

CHAPTER 2 PRESCRIPTIONS FOR CLASSES OF EXTERNAL LOAD AND CLASSES OF AERIAL WORK PASSENGERS

2.01 Classes of external loads

For subregulation 138.410 (3), the following classes of external load operations are prescribed:

- (a) a Class A external load, as defined in subsection 1.04 (6);
- (b) a Class B external load, as defined in subsection 1.04 (6);
- (c) a Class C external load, as defined in subsection 1.04 (6);
- (d) a Class D external load, as defined in subsection 1.04 (6);
- (e) a Class E external load, as defined in subsection 1.04 (6).

2.02 Aerial work passengers — classes of persons

- (1) The following classes of persons are prescribed for the definition of *aerial work passenger* in the CASR Dictionary:

- (a) persons:
 - (i) present for a purpose, other than mere convenience or enjoyment, that is reasonably and closely associated with the purpose of the operator's aerial work operations; and
 - (ii) mentioned in the operations manual in a section describing:
 - (A) why the person is present; and
 - (B) the procedures for the person's safety and personal awareness of risks;

Note Examples of persons mentioned in paragraph (1) (a) include persons whose absence would be likely to do any of the following:

- (a) increase the risks associated with the operation;
- (b) make the operation longer in duration;
- (c) result in the operation being frustrated or incomplete;
- (d) result in training and checking objectives not being accomplished;
- (e) result in safety information not being collected for the operator's safety management system.

- (b) persons carried on positioning flights.

Note See the definition of *positioning flight* in subsection 1.04 (6).

- (2) The following classes of persons are also prescribed for the definition of *aerial work passenger* in the CASR Dictionary:

- (a) persons rescued as part of search and rescue operations;
- (b) restricted persons if the flights are conducted as part of emergency service operations;
- (c) emergency service operation personnel if the flights are conducted as part of emergency service operations;
- (d) marine pilots, when being transferred to or from ships requiring the services of a marine pilot.

Note See also section 11.06.

CHAPTER 3 OTHER PRESCRIBED BODIES AND ORGANISATIONS INCLUDED IN, OR EXCLUDED FROM, DEFINITIONS FOR PART 138 OF CASR

3.01 Other operations excluded from definition of *aerial work operation*

For paragraph 138.010 (5) (g), the following operations that might otherwise be, or appear to be, aerial work operations, are not included within the definition of *aerial work operation*:

RESERVED

3.02 Task specialists included in definition

- (1) For paragraph 138.015 (2) (a) of the definition of *task specialists*, this section prescribes kinds of crew members who are task specialists.
- (2) In a task specialist operation where only flight crew are carried on the aircraft, each FCM is prescribed as a task specialist for the flight.
- (3) In a task specialist operation where an air crew member is required to be carried for the flight, the air crew member is prescribed as a task specialist for the flight, if the air crew member:
 - (a) is required to carry out a task specialist function on the flight; and
 - (b) has been trained and found competent to carry out the function.
- (4) In a flight (the *first flight*), solely to position for a subsequent task specialist operation, a person carried in order to be the task specialist in the subsequent operation is prescribed as a task specialist for the first flight.

3.03 Authorities for emergency service operations

The following authorities are each prescribed for paragraph (b) of the definition of *emergency service operation* in the CASR Dictionary:

- (a) the Australian Federal Police;
- (b) the Australian Defence Force;
- (c) the Australian Maritime Safety Authority;
- (d) the Australian Border Force;
- (e) a State or Territory police service;
- (f) a State or Territory fire service;
- (g) a State or Territory emergency service;
- (h) a State or Territory parks, wildlife or forestry service;
- (i) a State or Territory surf lifesaving service.

CHAPTER 4 TRAINING AND CHECKING SYSTEM

4.01 Application

This Chapter applies only to an aerial work certificate holder.

4.02 Training and checking system

- (1) For paragraph 138.125 (1) (c), an aerial work certificate holder who conducts one or more of the following operations must have a training and checking system:
 - (a) an operation using offshore airborne radar approach procedures in accordance with section 8.6 of the Part 173 MOS;
 - (b) an operation using the descent and operational procedures set out in Division 3, 4 or 5 of Chapter 9, as the case requires;
 - (c) an operation for the purposes of training and checking air crew members under Chapter 24 of this MOS.
- (2) Paragraph (1) (b) does not apply if the operation is a task specialist operation for the purpose of protecting agricultural crops from frost.

CHAPTER 5 SAFETY MANAGEMENT SYSTEM

5.01 Application

This Chapter applies only to an aerial work certificate holder.

5.02 Safety management systems

- (1) For paragraph 138.140 (1) (c), an aerial work certificate holder who conducts one or more of the following must have a safety management system:

RESERVED

- (2) For subregulation 138.140 (2), an aerial work certificate holder is not required to have a safety management system for an aerial work operation conducted in an aeroplane if the following circumstances apply to the aeroplane:

RESERVED

- (3) For subregulation 138.140 (2), an aerial work certificate holder is not required to have a safety management system for an aerial work operation conducted in a rotorcraft if the following circumstances apply to the rotorcraft:

RESERVED

CHAPTER 6 PERSONNEL FATIGUE MANAGEMENT

6.01 Application

This Chapter applies to the following operators:

- (a) an aerial work certificate holder;
- (b) a limited aerial work operator.

6.02 Personnel fatigue management

- (1) For subregulation 138.150 (1), this Chapter applies to the external load, dispensing and task specialist operations of an operator.
- (2) For subregulation 138.150 (2), an aerial work certificate holder must comply, and ensure that FCMs comply, with CAO 48.1 as if the holder were an Air Operator Certificate (**AOC**) holder.
- (3) A limited aerial work operator must ensure that a pilot in a limited aerial work operation complies with paragraph 4.4 and subsection 16 of CAO 48.1.

CHAPTER 7 OPERATIONS MANUAL

7.01 Application

This Chapter applies only to an aerial work certificate holder (the *operator*).

7.02 Minimum distance from an object

- (1) For subregulation 138.210 (3), if the distances mentioned in subsection (2) are not mentioned in the AFM, then, the distances are the appropriate substitute distances that the operator includes in the operations manual for this purpose.
- (2) For subsection (1), the distances are the minimum distances a rotorcraft must be from an object during the take-off, take-off and initial climb, approach and landing, and baulked landing climb, phases of flight.

7.03 Requirements for prescribed single-engine aeroplane (PSEA)

For regulation 138.020, aerial work operations must not be conducted in a PSEA unless the operator's operations manual includes the procedures for PSEA operations that are specified in the Part 135 MOS for the purposes of subregulation 135.240 (3) of CASR.

CHAPTER 8 OPERATIONAL DOCUMENTS

8.01 Application

This Chapter applies to the following operators:

- (a) an aerial work certificate holder;
- (b) a limited aerial work operator.

8.02 Compliance with the aircraft flight manual (AFM)

For subregulation 138.210 (3), the requirements and limitations relating to the operation of an aircraft, as set out in the AFM instructions for the aircraft, need not be complied with by the operator, or the operator's pilot in command, of a rotorcraft mentioned in subsection 8.03 (1) if the circumstances mentioned in subsection 8.03 (2) apply to the aircraft for the flight.

8.03 Avoid area of the HV curve chart of a rotorcraft AFM

- (1) For section 8.02, the rotorcraft (the *relevant rotorcraft*):
 - (a) must be the subject of:
 - (i) a type approval certificate issued under regulation 21.13A of CASR;
and
 - (ii) a certificate of airworthiness for use as a transport category helicopter, issued under regulation 21.176 of CASR; and
 - (b) must have an AFM limitation or requirement in relation to operations inside the avoid area of the HV envelope; and
 - (c) must be conducting one of the following operations:
 - (i) an emergency service operation at an ESO operating site, for which the rotorcraft's operator and crew have:
 - (A) conducted an operational risk assessment; and
 - (B) found the site to be a suitable place to operate the rotorcraft safely;
 - (ii) an external load operation.
- (2) For section 8.02, the circumstances are that it would be impossible for the rotorcraft to carry out the operation if, for the operation, the operator were to direct the pilot in command to attempt, and the pilot in command were to attempt, to comply with the AFM limitation or requirement in relation to operations inside the avoid area of the HV envelope.

Note Nothing in subsection 8.03 (2) affects the application of AFM limitations and requirements in relation to assessment of rotorcraft performance.

CHAPTER 9 FLIGHT RULES — MINIMUM HEIGHT

Division 1 Preliminary

9.01 Application

Unless it provides otherwise, this Chapter applies to the following operators:

- (a) an aerial work certificate holder;
- (b) a limited aerial work operator.

9.02 Minimum height rules

- (1) For regulation 138.275, the minimum height requirements under regulations 91.265, 91.267, 91.277 and 91.305 do not apply to a pilot in command of an aircraft for a flight involving an aerial work operation if:
 - (a) the flight occurs in the circumstances described in subregulation 91.265 (4), 91.267 (3), 91.277 (3) or 91.305 (3), as the case requires; or
 - (b) the applicable requirements prescribed in this Chapter are complied with.

Note 1 In this MOS, references to an aerial work operation include training for the aerial work operation: see regulation 138.010.

Note 2 Regulation 138.275 disappplies regulations 91.265, 91.267, 91.277 and 91.305 if circumstances or requirements relevantly prescribed in this MOS apply to an aircraft or an operation. If the circumstances or requirements prescribed in this MOS do not apply to an aircraft or an operation, then regulations 91.265, 91.267, 91.277 and 91.305 apply to the aircraft and operation.

- (2) For a positioning flight, the following minimum height requirements apply until the aerial work operation that the positioning flight facilitates, commences:
 - (a) for a positioning flight conducted to facilitate an aerial work operation — the minimum height requirements under regulation 91.265, 91.267, 91.277 or 91.305, as the case requires;
 - (b) for a positioning flight using NVIS and conducted under CAO 82.6 — the minimum height permitted for such a flight under CAO 82.6.

Division 2 Close proximity to an object in an area that is not a populous area or a public gathering

9.03 Requirements for aircraft flight in close proximity to an object in an area that is not a populous area or a public gathering

- (1) Without affecting any other provision in this Chapter, this section applies to the operator and the pilot in command of an aircraft that is flown in close proximity to an object in an area that is not a populous area or a public gathering.
- (2) Regulation 91.267 does not apply to the flight if the requirements in this section are complied with.
- (3) A risk assessment must be carried out in accordance with the applicable provisions of Chapter 13.
- (4) Subject to subsection (5), if the operation is to be conducted as follows:
 - (a) below 300 ft above the highest obstacle;
 - (b) over any point on ground or water vertically below the aircraft that is within 150 m of a person (a *relevant person*), or of a vessel, a vehicle, or a structure (a *relevant thing*), or of any livestock, not associated with the

operation, likely to be adversely affected by the aircraft's noise (*relevant livestock*);

then the operator and the pilot in command must:

- (c) give public notice of the intended operation by the most appropriate method for the circumstances; and
- (d) consider all comments and objections, whether written or oral, received before the operation commences; and
- (e) if any comment or objection is about the safety of relevant persons, or the risks of damage or injury to a relevant thing or relevant livestock:
 - (i) re-examine the risk assessment for the operation in light of the comment or objection; and
 - (ii) be satisfied that the risk can be mitigated and the operation can be safely carried out.

Note The operation does not require an AWZ. A relevant comment or objection made to the pilot in command or to any of the operator's personnel before the operation commences is sufficient for paragraph (d) or (e).

- (5) Subsection (4) does not apply to:
 - (a) an ESO operation the purpose of which is to save any person, vessel, vehicle, structure or livestock, from harm or destruction; or
 - (b) an operation where:
 - (i) the operator knows that the relevant thing is unoccupied, and there are no relevant livestock; and
 - (ii) the operator and the pilot in command each ensure that, when over or in close proximity to the relevant thing, the aircraft is operated in a way and at an altitude such that, in the event of an emergency, the aircraft can avoid endangering any relevant person, relevant thing or relevant livestock, on ground or water.

Division 3 Rotorcraft — IFR flight and VFR flight at night

Note This Division prescribes the requirements for an aerial work operation to descend below the minimum height that might otherwise apply under Part 91 of CASR.

9.04 Requirements for rotorcraft IFR flight, and VFR flight at night, below minimum height

- (1) For regulation 138.275, the pilot in command of a rotorcraft may fly below minimum height in an IFR flight, or in a VFR flight at night, only if:
 - (a) the flight is for an aerial work certificate holder; and
 - (b) the requirements in subsection (2) are complied with, subject to subsection (3).
- (2) For subsection (1), the requirements are the following:
 - (a) the rotorcraft must be operated in VMC;
 - (b) before descent, the pilot in command must have received confirmation that the area in which the rotorcraft is to operate is clear of obstructions and obstacles which may endanger the rotorcraft;
 - (c) if meteorological conditions below minimum height become less than VMC, then the rotorcraft must immediately commence a climb to resume operations above the minimum height;

- (d) at an ESO operating site:
 - (i) the rotorcraft operator must ensure that risk assessment and management procedures for such operations are contained in the operations manual; and
 - (ii) the operator and the pilot in command must each ensure that the procedures are followed for the operation;
 - (e) subject to paragraph (f), only essential crew members may be carried;
 - (f) an aerial work passenger may be carried but only:
 - (i) if the operation is an ESO; or
 - (ii) in accordance with Chapter 11;
 - (g) the flight below minimum height must:
 - (i) be essential for conducting the aerial work operation; and
 - (ii) be planned to minimise the time the rotorcraft is unable to achieve a suitable forced landing, or safe continuation of flight, if an engine failure occurs; and
 - (iii) not create a hazard for third parties not involved in the operation;
 - (h) for night operations — the rotorcraft must be operated using an NVIS with an NVIS qualified crew, in accordance with CAO 82.6 and Part 61 of CASR;
 - (i) if the rotorcraft is a single-engine rotorcraft operated at night, the requirements in section 9.05 must be met if suitable forced landing areas are not available for the entire time the rotorcraft is operating below the minimum height.
- (3) Paragraphs (2) (h) and (i) do not apply to a task specialist operation:
- (a) that is below minimum height; and
 - (b) that is for the purpose of protecting agricultural crops from frost; and
 - (c) for which the area of the operation is adequately illuminated with flood lighting.

9.05 When no suitable forced landing area is available

Note Various sections of this MOS call up this section. This section is for each of the following provisions of this MOS, but subject to the terms of the provision. The descriptions in brackets are for guidance only:

- (a) paragraph 9.04 (2) (i) (flight below minimum IFR, and NVFR, height); and
- (b) sub-subparagraph 9.23 (7) (a) (iii) (A) (flight over a populous area or public gathering); and
- (c) sub-subparagraph 11.03 (1) (d) (iv) (B) (carriage of 1 but no more than 2 aerial work passengers in night VFR); and
- (d) subparagraph 15.06 (2) (c) (i) (but only the requirements in paragraphs 9.05 (b), (c), (d) and (e) apply) (winching for other than an ESO, by day under the VFR); and
- (e) subparagraph 15.06 (2) (d) (i) (but only the requirements in paragraphs 9.05 (b), (c), (d) and (e) apply) (winching, by day under the VFR for an ESO); and
- (f) sub-subparagraph 15.06 (3) (e) (i) (A) (but only the requirements in paragraphs 9.05 (b), (c), (d) and (e)) (class D external load operations using a belly hook).

The requirements are as follows:

- (a) the operator must hold a CASA approval under regulation 138.025 for the operation;

- (b) the rotorcraft must be a turbine-engine powered rotorcraft;
- (c) with effect from the beginning of 2 December 2023 — for paragraph 9.04 (2) (i) and sub-subparagraph 9.23 (7) (a) (iii) (A):
 - (i) the rotorcraft must be fitted with a serviceable usage monitoring system; and
 - (ii) the operator must download and use the data from the usage monitoring system to ensure the rotorcraft is operated within its limitations;

Note It is recommended that rotorcraft be fitted with a usage monitoring system sooner, where this is feasible.
- (d) if a rotorcraft:
 - (i) requires hydraulic assistance for flight control in any phase or configuration of flight; and
 - (ii) in the event of failure of the hydraulic system or its power supply in the flight phase or configuration — cannot be controlled manually by the pilot in command;

the rotorcraft must have dual redundancy in the hydraulic system and its power supply;
- (e) the rotorcraft must be fitted with a secondary or redundant means of controlling the fuel flow to the engine should the primary means fail;
- (f) subject to paragraph (g), only essential FCMs, air crew members and task specialists may be carried on the flight;
- (g) an aerial work passenger may only be carried in accordance with be paragraph 9.04 (2) (f) and Chapter 11;
- (h) the operation must be planned to minimise the time the rotorcraft is unable to achieve a suitable forced landing, or safe continuation of flight, if an engine failure occurs.

Division 4 Aircraft IFR flight below minimum height over the sea

9.06 Requirements for aircraft IFR flight below minimum height in IMC or at night over the sea

- (1) This Division applies to the pilot in command of an aircraft in an operation only if:
 - (a) the operation is for an aerial work certificate holder; and
 - (b) the flight is an IFR flight below minimum height, in IMC or at night, over the sea (the *flight*); and
 - (c) the flight is not a search or rescue operation involving an auto-hover using transition mode capability over the sea.

Note 1 The requirements in Chapter 15, particularly section 15.07 for night external load operations, apply to the operation.

Note 2 A rescue operation is the actual rescue component of a SAR operation. A SAR recovery operation involving an auto-hover using transition mode capability over the sea falls under Division 4 of this Chapter.

Note 3 Division 4 provides for specific auto-hover SAR manoeuvres which use a complex descent and positioning capability over the sea to position a rotorcraft for an auto-hover and winch recovery operation in IMC or where pilot reference to outside objects is not possible. On the other hand, once a rotorcraft has met the visibility and minimum altitude requirements of sections 9.12 and 9.13, the auto-hover function of the rotorcraft's AFCS may be used for positioning the rotorcraft over the sea in the rescue component of a SAR recovery operation

under subsection 9.13 (2), provided the rotorcraft has the required capability and equipment in accordance with the AFM, and the pilot in command considers the descent is safe.

- (2) Regulation 91.305 does not apply to the flight if the following requirements are complied with:

Note Regulations 91.265, 91.267, and 91.277 continue to apply but, subject to section 9.13 for regulation 91.267, would have no practical application.

- (a) the flight below minimum height must be an IFR flight for surveillance or SAR, and involve flight along a route, or a route segment, over the sea;
- (b) the flight must be conducted by an aerial work certificate holder;
- (c) the flight must comply with the other requirements set out in this Division.

9.07 Distance and obstacle requirements etc.

- (1) The flight must not commence its descent below minimum height unless the pilot in command has determined that the following are not within the area that is 20 NM ahead along track and 5 NM either side of track:
 - (a) the Australian mainland or Tasmania;
 - (b) any obstacle having a height greater than 300 ft above sea level.
- (2) For a flight below minimum height at night — the flight must be at least 5 NM from the following:
 - (a) the Australian mainland or Tasmania;
 - (b) any obstacle having a height greater than 300 ft above sea level.
- (3) A distance mentioned in subsection (1) or (2) must be in addition to any tolerances that must be applied to the following:
 - (a) the navigation equipment fitted to the aircraft that is used to establish the position of the aircraft;
 - (b) the techniques used to determine the position of the aircraft before descent from minimum height.
- (4) Before descent below minimum height — the pilot in command must:
 - (a) establish the position of the aircraft; and
 - (b) ensure that the aircraft will remain clear of obstacles in accordance with this section.

Note The operator's pre-low flying procedures, as set out in the operations manual, must be followed.

9.08 Crew requirements

- (1) For a flight at night, the pilot in command must have:
 - (a) a minimum of 10 hours' experience as pilot in command or pilot in command under supervision (**PICUS**), in night surveillance or night search operations; and
 - (b) conducted a night surveillance, or night search operation, or a training or recency flight for night surveillance or night search operations, as pilot in command or PICUS within the 60 days before the operation.
- (2) The minimum crew must be the greater of:
 - (a) the crew specified in the AFM for the operation; or
 - (b) the crew specified in subsection (3).

- (3) For paragraph (2) (b), the specified crew are:
 - (a) for an aeroplane — 2 pilots, or 1 pilot with 1 radar observer who meets the training and proficiency requirements set out in the operator's operations manual for an air crew member to be a radar observer; or
 - (b) for a rotorcraft — 2 pilots, except if dual 4-axis autopilots are fitted then 1 pilot, and 1 trained air crew member in the co-pilot seat.

9.09 Persons who may be carried during the flight

Only the following may be carried during the flight:

- (a) the FCMs, the air crew members and the task specialists required for the operation;
- (b) a person under training to qualify as an FCM, an air crew member, or a task specialist;
- (c) an aerial work passenger described in section 2.02, provided the aerial work passenger is carried in accordance with this Chapter and Chapter 11.

9.10 Flight below 1 500 ft in IMC or at night

For a flight below 1 500 ft above sea level in IMC or at night, the following requirements must be complied with:

- (a) turns must be limited to the lesser of the following:
 - (i) 25 degrees angle of bank;
 - (ii) a standard rate turn;
 - (iii) the radio altimeter unlock angle;
- (b) maximum rate of descent must be no greater than 500 ft per minute;
- (c) if the aircraft is an aeroplane:
 - (i) it must be a PSEA or a multi-engine aeroplane; and
 - (ii) its minimum airspeed must be 1.3 Vs for the aeroplane configuration; and
 - (iii) its flap setting must be no greater than that recommended for take-off or manoeuvring; and
 - (iv) it must, if it is a multi-engine aeroplane, be capable, with OEI, and while complying with the requirements of Part 91 of CASR:
 - (A) of climbing to the minimum height required under regulation 91.265, 91.267, 91.277 or 91.305, as applicable for the flight; and
 - (B) thereafter, of flying to a suitable aerodrome for landing;
- (d) for a rotorcraft:
 - (i) except when complying with sections 9.04, 9.12 and 9.13 — the rotorcraft's minimum airspeed must be not less than whichever of the following is the greatest:
 - (A) V_{mini} ;
 - (B) V_y for the rotorcraft;
 - (C) 60 kts; and
 - (ii) except when operating at an ESO operating site — the rotorcraft must be a multi-engine rotorcraft operated with OEI accountability during the operation.

9.11 Radar and instruments

- (1) An aircraft must be fitted with the following equipment:
 - (a) a radar that has a ground-mapping function;
 - (b) a radio altimeter;
 - (c) a navigation system.
- (2) Operations must not be commenced, or if commenced must be discontinued immediately, if:
 - (a) any of the equipment required for the operation fails or has failed; or
Note For equipment requirements, see Subpart 138.K, and Part 91, of CASR.
 - (b) the equipment mentioned in subsection (1) fails or has failed; or
 - (c) there is a RAIM warning or any reason to doubt the integrity of the GNSS-derived information; or
 - (d) there is a RAIM loss.

9.12 Visibility

- (1) Operations must not be conducted unless visibility:
 - (a) at 1 000 ft above sea level — for aeroplanes; or
 - (b) at 700 ft above sea level — for rotorcraft;meets the VMC criteria for:
 - (c) the category of aircraft used in the operation; and
 - (d) the class of airspace within which the aircraft is operating during the operation.
- (2) For an operation in cloud below minimum height the requirements are as follows:
 - (a) the minimum descent altitude to obtain visual reference below cloud must not be less than 1 000 ft above sea level for aeroplanes, or 700 ft above sea level for rotorcraft, derived from the aircraft radio altimeter;
 - (b) if:
 - (i) visibility prescribed in subsection (1) is not obtained; or
 - (ii) visibility below cloud is reduced to less than that required under subsection (1);then the pilot in command must immediately return the aircraft to at least minimum height.
- (3) After visual investigation of a target or search area, the aircraft must immediately initiate a climb to at least minimum height, unless section 9.13 applies.

9.13 Minimum altitude

- (1) Subject to subsection (2), the minimum altitude must be not lower than 500 ft, derived from the aircraft radio altimeter.
- (2) A rotorcraft may descend below 500 ft, by day only, to identify a person or object, or to rescue a person, if the following requirements are met:
 - (a) at least the minimum visibility to maintain VMC is available below cloud;
 - (b) the location of the person or object has been pinpointed or confirmed;

- (c) the rotorcraft has, in accordance with its AFM, the performance capability and the equipment required to descend and conduct the rescue operation;
 - (d) the descent is in accordance with the requirements of section 9.04;
 - (e) the pilot in command considers that the descent is safe.
- (3) For subsections (1) and (2), regulation 91.267 do not apply.

Note The requirements in Chapter 15 for night external load operations apply to the operation.

Division 5 Rotorcraft IFR flight that is a SAR operation involving an auto-hover using transition mode capability over the sea

9.14 Requirements for rotorcraft IFR flight involving an ESO SAR auto-hover using transition mode capability over the sea

- (1) This Division applies only to the pilot in command of a rotorcraft of an aerial work certificate holder in an IFR flight:
- (a) that is an ESO SAR operation involving an auto-hover using transition mode capability over the sea (the *flight*); and
 - (b) for which none of the following is available:
 - (i) VMC;
 - (ii) reference to external objects that are adequately illuminated by ground;
 - (iii) celestial lighting.

Note Auto-hover using transition mode capability SAR descent procedures may be used in VMC if the pilot in command considers that this is the most suitable descent profile for the operation or for training in the conduct of such operations.

- (2) Regulations 91.267, 91.277 and 91.305 do not apply to the flight if the requirements mentioned in this section are met.
- Note* Regulation 91.265 continues to apply but would have no practical application.
- (3) The flight must be conducted by an aerial work certificate holder.
- (4) The flight must comply with the other requirements set out in this Division.

9.15 Operating crew

The operating crew for the flight must:

- (a) consist of 2 pilots qualified for IFR flight in accordance with Part 61 of CASR, and at least 1 air crew member; and
- (b) be individually equipped with lifesaving and survival equipment applicable to the environment of the operation.

9.16 Rotorcraft requirements

- (1) The flight must be in a rotorcraft that complies with the requirements in this section.
- (2) The rotorcraft must be a multi-engine rotorcraft operated at a weight which allows OEI accountability.
- (3) The rotorcraft must have auto-hover capability including:
- (a) dual 4-axis autopilots with serviceable auto-hover capability and transition mode capability; and
- Note* See section 1.04 for the definition of *transition mode capability*.
- (b) a flight director system coupled to the autopilot that responds to instructions from a qualified air crew member.

- (4) Except when operating at an ESO operating site — the rotorcraft must be a multi-engine rotorcraft operated with OEI accountability during the operation.

9.17 The flight and obstacles

The flight must be carried out at a distance from obstacles, as authorised by the approved procedures in the operator's operations manual.

9.18 Weather may determine the persons who may be carried

If an authorised weather forecast for the flight is for conditions during the flight to be:

- (a) less than VMC; or
- (b) likely to become less than VMC;

then only the following persons may be carried on the rotorcraft:

- (c) qualified air crew members;
- (d) qualified task specialists;
- (e) a person rescued in the course of an ESO.

9.19 Requirements for descent

- (1) During the flight, descent from minimum flight altitude in the search and rescue area may only begin following a position fix using the aircraft's GNSS-based FMS.
- (2) Before, and in the course of, descent from minimum flight altitude to search height, the pilot in command of the rotorcraft must ensure the letdown track remains clear of obstacles and radar contacts by a minimum radar range of 5 NM.
- (3) For recovery of a person from water, the minimum height above water:
 - (a) at which a rotorcraft may be flown in a search area before descent and engagement of auto-hover for the recovery — is 200 ft (as derived from a radio altimeter); and
Note This minimum height is sometimes called the "low search height".
 - (b) for the auto-hovering — is 50 ft; and
 - (c) for the auto-hovering for training purposes — is 75 ft.

9.20 Use of the automatic flight control system (AFCS)

- (1) Unless the AFM provides otherwise, the flight must use the rotorcraft's AFCS.
Note Some emergency procedures may require disengaging the AFCS to avoid the pilot having to override it to achieve the desired outcome. If disengaged for this reason, the AFCS is normally re-engaged after the new flight profile is set.
- (2) The AFCS must be able to implement all procedures initiated by the pilot flying that are necessary for the successful completion of the operation (including go-around and discontinuance where necessary).
- (3) The flight must be discontinued immediately if there is a malfunction in the AFCS.

9.21 Use of the flight director (FD)

- (1) The flight must use the rotorcraft's FD.
- (2) The active FD must be on the side of the pilot flying the rotorcraft.

- (3) FD commands displayed to the non-flying pilot must be those selected by the pilot flying.

Division 6 Aircraft flight over populous areas etc. and other areas

9.22 Requirements for aeroplane flight over populous areas or public gatherings

- (1) This section applies to the pilot in command of an aeroplane that is flown over a populous area or a public gathering, if:
 - (a) the aeroplane is flown below the height, and closer than the distance, specified in paragraph 91.265 (2) (a); and
 - (b) none of the circumstances mentioned in subregulation 91.265 (4) applies.
- (2) Regulation 91.265 does not apply to the flight if the requirements in this section are complied with.
- (3) The flight must be an aerial work operation in an AWZ.
- (4) The flight must be conducted by an aerial work certificate holder.
- (5) Unless the flight is an ESO, there must be a risk assessment and an AWZ-RA in accordance with the applicable provisions of Chapter 13.
- (6) The flight must be:
 - (a) in a PSEA; or
 - (b) in a multi-engine aeroplane that, with OEI, is capable, while complying with the requirements of Part 91 of CASR:
 - (i) of climbing to the minimum height required under regulation 91.265, 91.267, 91.277 or 91.305, as applicable for the flight; and
 - (ii) thereafter, of flying to a suitable aerodrome for landing.

9.23 Requirements for rotorcraft flight over populous areas or public gatherings

- (1) This section applies to the pilot in command of a rotorcraft that is flown over a populous area or a public gathering, if:
 - (a) the rotorcraft is flown below the height, and closer than the distance, specified in paragraph 91.265 (3) (a); and
 - (b) none of the circumstances mentioned in subregulation 91.265 (4) applies.
- Note* An external load operation must not be conducted over a populous area or a public gathering without the written permission of CASA. See also section 15.09.
- (2) Regulation 91.265 does not apply to the flight if the requirements in this section are complied with.
- (3) The flight must be an aerial work operation in an AWZ.
- (4) The flight must be conducted by an aerial work certificate holder.
- (5) Unless the flight is an ESO, there must be a risk assessment and an AWZ-RA in accordance with the applicable provisions of Chapter 13.
- (6) The flight must be conducted in VMC and, if the operation is conducted at night, the pilot in command must use, and be qualified to use, an NVIS.

- (7) The rotorcraft must be operated:
- (a) with OEI accountability but only:
 - (i) if multi-engine — with at least en route **OEI** stay-up performance capability; or
 - (ii) if single-engine — with available suitable forced landing areas at all stages of the flight below the minimum height; or
 - (iii) if single-engine without available suitable forced landing areas at all stages of the flight below the minimum height — with:
 - (A) the requirements of section 9.05 met; and
 - (B) the rotorcraft operated so that it will not create a hazard to persons or property on ground or water in the event of an engine failure or other emergency; or
 - (b) if the flight is an external load operation in an AWZ and the rotorcraft cannot be operated with OEI accountability — only over such parts of the AWZ where an area is available which, if used for a forced landing, will not create a hazard to persons or property not directly involved in the operation.

CHAPTER 10 RESERVED

CHAPTER 11 CARRIAGE OF AERIAL WORK PASSENGERS OR AERIAL WORK CARGO

11.01 Application

- (1) This Chapter applies only to an aerial work certificate holder.
Note Only an aerial work certificate holder may carry aerial work passengers.
- (2) For the carriage of aerial work passengers or aerial work cargo in an NVIS operation, an aerial work certificate holder must comply with CAO 82.6.
- (3) The provisions of CAO 82.6 take priority over the other provisions of this Chapter but only to the extent of direct inconsistency with the other provisions of this Chapter.

11.02 Carriage of 1 to 9 aerial work passengers in IFR flights

- (1) For subparagraph 138.305 (2) (c) (iv), 1 to 9 aerial work passengers may be carried in an IFR flight, but only if the aircraft is:
 - (a) a multi-engine aeroplane; or
 - (b) a PSEA — except that if 4 or more aerial work passengers are being carried, only a PSEA that is operated in accordance with the operator's operations manual procedures for suitable routes and forced landing areas for a PSEA; or
Note See section 7.03.
 - (c) subject to subsection (2), a multi-engine rotorcraft operated with OEI accountability.
- (2) For paragraph (1) (c), a multi-engine rotorcraft need not be operated with OEI accountability if the rotorcraft is operated in an ESO, or in training for an ESO, and paragraphs (a) and (c), **or** (b) and (c), below, apply:
 - (a) it is landing at, or taking off from, an ESO operating site outside an AWZ; and
 - (b) it is being operated, at an ESO operating site, in accordance with the operator's operational risk assessment process under Chapter 13 for a Class D external load (that is, a person being rescued or the insertion or extraction of emergency service personnel); and
 - (c) when it departs from the ESO operating site it is able, from 300 ft above the site, to do the following until it reaches the minimum flight altitude for a point on the route for the flight:
 - (i) be operated at a weight at which the rate of climb with one engine inoperative would be at least 150 ft per minute at a height of 1 000 ft above the departure ESO operating site for the flight;
 - (ii) clear any obstacles in the flight path.

11.03 Carriage of 1 or 2 aerial work passengers in VFR flights at night

- (1) For subparagraph 138.305 (2) (c) (iv), up to 2 aerial work passengers may be carried in an VFR flight at night, but only if the aircraft is:
 - (a) a multi-engine aeroplane; or
 - (b) a PSEA; or
Note See section 7.03.

- (c) a single-engine rotorcraft but only if:
 - (i) the rotorcraft is operated over an area where there is substantial ground lighting; and
 - (ii) attitude can be maintained, and the availability of suitable forced landing areas can be ascertained, by the use of visual external surface cues as a result of the substantial ground lighting; or
 - (d) a single-engine rotorcraft but only if:
 - (i) the rotorcraft is equipped for an NVIS operation, with an NVIS qualified crew using NVIS as required by operational and lighting conditions in accordance with CAO 82.6; and
 - (ii) the rotorcraft operator is authorised for NVIS operations in accordance with CAO 82.6 and CASR; and
 - (iii) when over water:
 - (A) the operation occurs within 10 NM of the coast; and
 - (B) the rotorcraft is equipped with an approved rotorcraft floatation system; and
 - (iv) either:
 - (A) one or more suitable forced landing areas are available and usable by the rotorcraft at all stages of the flight; or

Note A suitable forced landing area is considered available if the flight crew: (a) can see it using natural vision and available lighting, or using their NVIS; and (b) can safely reach it from the rotorcraft's current position in the flight.
 - (B) the operator, the pilot and the rotorcraft meet each applicable requirement mentioned in section 9.05; or
 - (e) subject to subsection (2), a multi-engine rotorcraft operated with OEI accountability.
- (2) For paragraph (1) (e), the multi-engine rotorcraft need not be operated with OEI accountability if the rotorcraft is operated in an ESO, or in training for an ESO, and paragraphs (a) and (c), **or** (b) and (c), below, apply:
- (a) it is landing at, or taking off from, an ESO operating site outside an AWZ;
 - (b) it is being operated, at an ESO operating site, in accordance with the operator's operational risk assessment process under Chapter 13 for a Class D external load (that is, a person being rescued or the insertion or extraction of emergency service personnel);
 - (c) when it departs from the ESO operating site it is able, from 300 ft above the site, to do the following until it reaches the minimum flight altitude for a point on the route for the flight:
 - (i) be operated at a weight at which the rate of climb with one engine inoperative would be at least 150 ft per minute at a height of 1 000 ft above the departure ESO operating site for the flight;
 - (ii) clear any obstacles in the flight path.

11.04 Carriage of 3 to 9 aerial work passengers in VFR flights at night

- (1) Subject to subsection (3), for subparagraph 138.305 (2) (c) (iv), 3 to 9 aerial work passengers may be carried in an VFR flight at night, but only if the aircraft is:
 - (a) a multi-engine aeroplane; or

- (b) a PSEA — except that if 4 or more aerial work passengers are being carried, only a PSEA that is operated in accordance with the operator's operations manual procedures for a PSEA; or
Note See section 7.03.
- (c) subject to subsection (2) — a multi-engine rotorcraft equipped for flight under the IFR and operated with OEI accountability; or
- (d) subject to subsection (2) — a multi-engine rotorcraft:
 - (i) equipped for and using NVIS flight, with an NVIS qualified flight crew and an operator approved for NVIS operations; and
 - (ii) operated with OEI accountability.
- (2) For paragraphs (1) (c) and (d), the multi-engine rotorcraft need not be operated with OEI accountability if the rotorcraft is operated in an ESO, or in training for an ESO, and paragraphs (a) and (c), **or** (b) and (c) apply:
 - (a) it is landing at, or taking off from, an ESO operating site outside an AWZ; and
 - (b) it is being operated at an ESO operating site in accordance with the operator's operational risk assessment process under Chapter 13 for a Class D external load (that is, a person being rescued or the insertion or extraction of emergency service personnel); and
 - (c) when it departs from the ESO operating site it is able, from 300 ft above the site, to do the following until it reaches the minimum flight altitude for a point on the route for the flight:
 - (i) be operated at a weight at which the rate of climb with one engine inoperative would be at least 150 ft per minute at a height of 1 000 ft above the departure ESO operating site for the flight;
 - (ii) clear any obstacles in the flight path.
- (3) For an aeroplane mentioned in subsection (1):
 - (a) if the aeroplane has a MTOW that is less than 5 700 kg — a pilot assigned by the operator for the flight must be authorised under Part 61 of CASR to conduct an IFR flight; and
 - (b) if the aeroplane has a MTOW that is 5 700 kg or more — each pilot for the flight must be authorised under Part 61 to conduct an IFR flight.

11.05 Carriage of 10 or more aerial work passengers

For subparagraph 138.305 (2) (c) (iv), 10 or more aerial work passengers may be carried in an aerial work operation, but only if:

- (a) for an IFR flight, a VFR flight at night, or an operation over water — the aircraft is a multi-engine aircraft, type certificated in the transport category; and
- (b) for a day VFR operation — the aircraft is type certificated in the transport category; and
Note The aircraft's certificate of airworthiness would state that the certificate is issued in the transport category.
- (c) the total number of aerial work passengers on board the aircraft does not exceed a passenger limitation specified in the AFM; and
- (d) any aerial work passenger in excess of 9 may only be a person who has been rescued in the course of an ESO.

11.06 Requirements for aerial work passengers

- (1) Subject to subsection (2), for subregulation 138.305 (2) (c) (iv), a person may be carried on a flight as an aerial work passenger if the person is a member of a class of persons mentioned in section 2.02.
- (2) Subsection (1) applies only if the aerial work certificate holder has procedures in the operations manual:
 - (a) to ensure that the flight:
 - (i) is conducted in accordance with the requirements of this MOS (as applicable); and
 - (ii) does not contravene regulations 91.265, 91.267, 91.277 and 91.305, as and when they apply to the flight; and
 - (b) that describe how the requirements of regulation 91.565 will be complied with by the pilot in command of the flight; and
 - (c) for the conduct of the operation and the safety of the person.

CHAPTER 12 NIGHT VISION IMAGING SYSTEMS

12.01 Application

This Chapter applies to the following operators:

- (a) an aerial work certificate holder;
- (b) a limited aerial work operator.

12.02 NVIS flights

- (1) For subregulation 138.350 (3), for an aerial work certificate holder, the use of a night vision imaging system for a flight of an aircraft in an aerial work operation must be in accordance with the requirements in CAO 82.6.
- (2) A limited aerial work operator must not use NVIS.

CHAPTER 13 RISK ASSESSMENTS (INCLUDING AWZ-RAs)

Division 1 Risk — general

13.01 Application

Unless it provides otherwise, this Chapter applies to the following operators:

- (a) an aerial work certificate holder;
- (b) a limited aerial work operator.

13.02 Risk criteria — all operators

For paragraph 138.370 (1) (a), the risk criteria that an operator must meet to conduct an aerial work operation are that:

- (a) the operation can be conducted without unacceptable safety risk for the crew members and aerial work passengers who may be on board the aircraft; and
- (b) the operation can be conducted so that it presents no unacceptable risks to persons and property on the ground; and
- (c) the operation can be conducted so that it is not likely to have an adverse effect of the safety of air navigation.

13.03 Risk assessment and mitigation — all operators

For paragraph 138.370 (1) (b), before conducting an aerial work operation, an operator must ensure that risk assessment and mitigation processes have been undertaken in accordance with this Chapter.

13.04 Risk assessment matters — all operators

- (1) The matters set out in subsection (3) must be considered in assessing the risks of the operation against the risk criteria.
- (2) For subsection (1), the matters must be considered in the context of the nature, size and complexity of the operation.
- (3) For subsection (1), the matters are the following:
 - (a) the operation and its particular characteristics;
 - (b) the location of the operation and its particular characteristics;
 - (c) the aircraft to be used in the operation, its particular characteristics, and its performance class, if applicable;
 - (d) the qualifications and experience of the crew members to be used in the operation;
 - (e) the hazards, external to the aircraft, that may be met in the course of the operation.

13.05 Risk assessment and mitigation processes — limited aerial work operators

- (1) For paragraph 138.370 (1) (b), the risk assessment and mitigation processes to be undertaken by a limited aerial work operator are set out in this section.
- (2) Before commencing an aerial work operation, the operator must ensure that the pilot in command:
 - (a) reviews the risk criteria set out in section 13.02; and

- (b) considers the risk assessment matters set out in section 13.04; and
- (c) applies risk management planning and mitigation for the operation which satisfies the pilot in command that:
 - (i) the risks of the operation can be mitigated; and
 - (ii) the operation can be safely carried out.
- (3) The operator must ensure that before and during the operation, the pilot in command must take into account any reasonably available information relevant to managing the safety risks of the operation.

13.06 Risk assessment and mitigation processes — aerial work certificate holders only

- (1) For paragraph 138.370 (1) (b), the risk assessment and mitigation processes to be undertaken by an aerial work certificate holder (the *operator*) are set out in this section.
- (2) Before conducting an operation:
 - (a) the operator's operations manual must contain:
 - (i) pre-operational risk procedures for risk assessments and mitigation processes applicable to the operation; and
 - (ii) procedures for post-flight risk review; and

Note For these procedures see subsections 13.07 (1) and (3).
 - (b) the operator must have a flight risk management plan based on a pre-operational risk assessment in accordance with the procedures; and
 - (c) the operator must ensure that the operator and each crew member is satisfied, in a pre-flight risk review, that the flight risk management plan will eliminate, reduce or mitigate risks and hazards to the extent that it is safe to conduct, and continue, the operation without unacceptable risk to the crew members, any aerial work passengers, the aircraft or any other person or property.

Note For a *pre-flight risk review* see subsection 13.07 (2).
- (3) For an operator with a safety management system (*SMS*), the risk assessment and mitigation processes in accordance with this section must be integrated into the SMS.

13.07 Procedures for risk assessment and mitigation processes

- (1) For section 13.06, the operator's pre-operational risk procedures must include the following:
 - (a) processes for identifying, reporting and recording hazards;
 - (b) processes for analysing identified hazards and assessing the risks they may pose, including for pre-flight, in-flight and post-flight stages of operations;
 - (c) processes to mitigate the risks or control the risks, including processes for the incorporation of risk controls into standard operating procedures;
 - (d) the creation and management of:
 - (i) a risk register; and
 - (ii) records of dedicated risk assessments performed to address each type aerial work operation that is to be conducted, including details of the risk assessors;

- (e) procedures to ensure that the pilot in command and the other crew members are familiar with the pre-operational risk assessment and the associated standard operating procedures (SOP);
 - (f) in-flight procedures for the pilot in command and the other crew members to consider and manage the risks associated with aerial work operations.
- Note* The expression **risk assessors** is defined in subsection 1.04 (6).
- (2) For section 13.06, the operator's procedures must require that a **pre-flight risk review** be carried out that considers the following:
 - (a) the risk criteria;
 - (b) the pre-operational risk assessment;
 - (c) the flight risk management plan;
 - (d) the pre-flight satisfaction check under paragraph 13.06 (2) (c).
 - (3) For section 13.06, the operator's procedures must require that a post-flight risk review be carried out, including the updating of procedures to incorporate any lessons learnt from the operation.

Division 2 AWZ-RA — risk and related requirements

13.08 Application

For paragraph 138.370 (1) (b), the risk assessment and mitigation processes to be undertaken by an aerial work certificate holder (the **operator**) for an AWZ-RA are set out in this Division.

13.09 Preparation of an AWZ-RA — aerial work operations

- (1) This section is for regulations 138.410 (external load operations), 138.425 (dispensing operations) and 138.430 (task specialist operations).
- (2) Only an aerial work certificate holder may conduct aerial work operations over an AWZ.
- (3) Subject to subsection (4), this section applies only to the following operations conducted over an AWZ (the **AWZ operation**):
 - (a) an external load operation;
 - (b) a dispensing operation;
 - (c) a task specialist operation if the aircraft is flown below the height, and closer than the distance, specified in paragraph 91.265 (2) (a) or (3) (a), respectively.

Note **AWZ** is defined in section 1.05. See also section 9.22 and 9.23.

- (4) This section does not apply to an ESO involving an external load operation over an area that would otherwise require an AWZ if:
 - (a) the operator's operational risk assessment and mitigation process under sections 13.04 and 13.06 have been complied with; and
 - (b) the pilot in command of the aircraft is satisfied that, having considered all foreseeable safety risks, a reasonable pilot would conduct the ESO.
- (5) Before conducting the AWZ operation, the operator must:
 - (a) prepare and document an AWZ-RA; and
 - (b) hold a CASA approval under regulation 138.025 for the AWZ-RA, unless:
 - (i) subsection (6) applies; or

- (ii) it is planned that the aircraft will at all times:
 - (A) be above 500 ft; and
 - (B) when operating below 1 000 ft above the highest obstacle within 600m, have a suitable forced landing area.
- (6) An aerial work certificate holder does not require CASA approval under regulation 138.025 of an AWZ-RA for an external load operation if:
 - (a) the entire operation, including pick-up and set-down points, is planned to occur in an AWZ; and
 - (b) the AWZ is totally under the control of:
 - (i) the operator; or
 - (ii) the person requesting the operation; and
 - (c) access to the AWZ is limited to persons essential for the conduct of the operation.
- (7) The AWZ operation must be conducted:
 - (a) in accordance with the AWZ-RA; and
 - (b) taking into account all matters contained within the AWZ-RA.
- (8) An AWZ-RA must be retained in safe custody by the operator for at least 3 years after the external load operation has ended.
- (9) An AWZ-RA prepared by the operator for a Class B external load operation must:
 - (a) include the pick-up and set-down points of the operation; and
 - (b) include the routes between the pick-up and set-down points; and
 - (c) subject to paragraph (d), be for an AWZ that is of a size sufficient for the safe management of all risks and hazards identified in the operators risk management process; and
 - (d) be for an AWZ:
 - (i) that is free of risk of injury to persons who are not associated with the operation; and
 - (ii) that minimises, as far as practicable, risk of injury to the persons:
 - (A) carrying out the operation; or
 - (B) for whom the operation is being carried out; and
 - (iii) in which hazard to property not associated with the operation is not likely to arise.

CHAPTER 14 SEATBELTS AND OTHER RESTRAINT DEVICES

14.01 Application

Unless it provides otherwise, this Chapter applies to the following operators:

- (a) an aerial work certificate holder;
- (b) a limited aerial work operator.

14.02 Wearing of seatbelts and other restraint devices

- (1) 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.
- (2) 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.

14.03 Safety harness or a restraint strap

- (1) For subregulation 138.375 (1), this section applies only to an aerial work certificate holder.
- (2) A person is taken to comply with section 14.02 if the person wears a safety harness or a restraint strap instead of a seatbelt.
- (3) When a safety harness or a restraint strap (the **equipment**) is worn instead of a seatbelt, the equipment must be:
 - (a) fit for the particular purpose of the operation; and
 - (b) compliant with the requirements of, or approved under, Part 21 of CASR; and
 - (c) serviceable before the operation commences.
- (4) Before the aircraft's flight, or a related series of flights, a crew member intending to wear the equipment must have been trained by the operator in the use of the equipment and assessed as competent.
- (5) The equipment must be:
 - (a) available at all times for the crew member who is to use the equipment; and
 - (b) correctly fitted, worn and adjusted to prevent the crew member who is using the equipment from completely exiting the aircraft when wearing the equipment; and
 - (c) secured, via the restraint strap, to an aircraft hard point in accordance with relevant approved data; and
 - (d) the subject of confirmation by the pilot in command and the crew member that paragraphs (a) to (c) are complied with.
- (6) A crew member who intends during flight to transfer from a seatbelt to the equipment must be secured by the equipment before the crew member unfastens the seatbelt.

- (7) The aircraft must not be manoeuvred in a way that subjects a crew member to additional flight loads unless the crew member has been briefed on the manoeuvre by the pilot in command.
- (8) A crew member proposing to move around in the aircraft's cabin while wearing the equipment must:
 - (a) advise the pilot in command of the proposed movements; and
 - (b) not adversely affect the aircraft's centre of gravity or controllability.

CHAPTER 15 RULES FOR EXTERNAL LOAD OPERATIONS

Division 1 Class D external loads

15.01 Application

Unless it provide otherwise, this Chapter applies only to an aerial work certificate holder.

Note By virtue of subparagraph 138.030 (2) (b) (iii), only an aerial work certificate holder may conduct a Class D external load operation.

15.02 Persons who may be carried as external loads

For subregulation 138.410 (2), the following classes of persons are prescribed for carriage on or in a part of an aircraft that is not normally specified in the AFM as being for the carriage of crew members or aerial work passengers in an aerial work operation:

- (a) air crew members;
- (b) task specialists;
- (c) aerial work passengers.

Note Some AFM Supplements may provide, as part of a winching equipment supplement, for the carriage of a person on, for example, additional steps or footholds installed on a rotorcraft.

15.03 Aerial work operation requirements if a person is carried as an external load

For subregulation 138.410 (2), for an operation in which a person in a class of persons mentioned in section 15.02 is carried as an external load the following requirements apply to the operator and pilot in command:

- (a) restraint equipment appropriate to the task must be worn in accordance with section 14.03;
- (b) 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;
- (c) the rescue harness or other rescue device mentioned in paragraph (b) 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.

15.04 Operational requirements if person carried on or in an attachment to an aircraft

- (1) For subregulation 138.410 (2), for an operation mentioned in section 15.02, the requirement mentioned in subsection (2) applies to the operator and pilot in command.
- (2) The requirement is that all external load equipment, fittings, lines, safety harnesses, restraint straps and rescue harnesses must be compliant with the requirements of, or approved under, Part 21 of CASR.

15.05 Classes of persons who may be picked-up or set-down

For section 15.06, the following persons are the only persons who may be picked-up or set-down, and the picking up and setting down must be in accordance with the section:

- (a) air crew members;
- (b) task specialists;
- (c) aerial work passengers.

15.06 Operational requirements if a person is picked-up or set-down

- (1) For subregulation 138.410 (2), for a Class D external load operation where a person mentioned on section 15.05 is picked up or set down, the operator and the pilot in command must meet the requirements set out in this section.

Class D external loads — winching

- (2) For a Class D external load operation that involves winching a person (**operation**) the operator and the pilot in command must meet the following requirements:
 - (a) application of the operator's operational risk assessment and mitigation process must indicate that the operation meets at least an acceptable level of safety;
Note See sections 13.04 and 13.06.
 - (b) for an operation that is not an ESO — the rotorcraft must be a multi-engine rotorcraft capable of hovering out of ground effect with one engine inoperative during the winching operation;
 - (c) despite paragraph (b), for a day VFR operation that is not an ESO — the rotorcraft need not be capable of hovering out of ground effect (**HOG**) with one engine inoperative during the winching operation provided that the rotorcraft:
 - (i) meets the requirements set out in paragraphs 9.05 (b), (c), (d) and (e); and
 - (ii) has a mass that does not exceed 90% of the MTOW HOG permitted by the AFM for the most limiting mass of the operation; and
 - (iii) is not operating over water; and
 - (iv) carries only flight crew, and essential air crew members and task specialists (if any);
 - (d) for an operation that is an ESO, or training for an ESO — the rotorcraft must:
 - (i) for day VFR operations — at least meet the requirements set out in paragraphs 9.05 (b), (c), (d) and (e); and
 - (ii) for operations under the IFR — be a multi-engine rotorcraft with OEI accountability; and
 - (iii) for operations at night:
 - (A) be a multi-engine rotorcraft with OEI accountability; and
 - (B) be capable of using (and the pilot in command must be using) NVIS for the operation;
 - (e) despite subparagraphs (d) (ii) and (iii), and subject to Chapter 11, for an operation that is an ESO, or is training for an ESO, when operating over an

ESO operating site, the rotorcraft need not be operated with OEI accountability provided the operator's risk assessment indicates that it is safe not to so operate;

- (f) the FCMs, air crew members and task specialists in the operation must be able to communicate directly with each other using:
 - (i) radiocommunications; or
 - (ii) an effective system of visual communication.

Class D external loads — belly hook or platform

- (3) If an operation is a Class D external load operation in the form of a person:

- (a) suspended from a belly hook attached to the rotorcraft; or
 - (b) carried on a platform attached to the rotorcraft;

then the operator and pilot in command must meet the following requirements:

- (c) application of the operator's operational risk assessment process must indicate that the operation meets at least an acceptable level of safety;
Note See Chapter 13.
 - (d) the FCMs, air crew members and task specialists in the operation must be able to communicate directly with each other using:
 - (i) radiocommunications; or
 - (i) an effective system of visual communication;
 - (e) if the rotorcraft cannot hover out of ground effect (**HOG**E) with one engine inoperative during the operation, the following requirements apply:
 - (i) the rotorcraft must:
 - (A) meet the requirements set out in paragraphs 9.05 (b), (c), (d) and (e); and
 - (B) have a mass that does not exceed 90% of the MTOW HOG E permitted by the AFM for the most limiting mass of the operation;
 - (ii) if the operation is a water rescue operation;
 - (A) the operation must occur within 5 NM of the coast; and
 - (B) the rotorcraft must be equipped with an approved rotorcraft floatation system;
 - (iii) except for a water rescue operation, only essential air crew members or task specialists may be carried in the operation.

Class D external loads — belly hook

- (4) Subject to subsection (5), for an operation mentioned in paragraph (3) (a), the operator and pilot in command must ensure that the following requirements are met:
 - (a) the belly hook must be approved in writing by CASA;
 - (b) the operation must include a primary load path and a backup load path, each of which allow the person to be safely jettisoned in an emergency;
 - (c) each load path must consist of:
 - (i) a primary quick release system that requires 2 separate and distinct actions to release; and
 - (ii) a backup quick release system that requires 2 separate and distinct actions to release.

- (5) If the operation mentioned in paragraph (3) (a) is a water rescue operation, the operator and the pilot in command must ensure that the hook is attached to an approved attachment point on the helicopter and is such that:
 - (a) it meets the requirements of paragraphs (4) (a) to (c); or
 - (b) it allows the rescue equipment to be released by:
 - (i) a means of release operated by the pilot; and
 - (ii) another means of release operated manually by a crew member stationed in the helicopter.

Class D external loads — rappelling

- (6) 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**), the operator and the pilot in command must ensure that the operation is:
 - (a) an ESO conducted by ESO personnel who have received advanced operational training in rappelling techniques; or
 - (b) training of ESO personnel for an operation described in paragraph (a).

Class D external loads — hover exit and entry

- (7) For a Class D external load operation that involves a person emplaning or deplaning while the rotorcraft is in flight or partially in flight (a **hover entry or exit**), the operator and the pilot in command must ensure that the person is an air crew member, a task specialist, or an aerial work passenger, who has received hover entry and exit training in accordance with the operator's operations manual.

Division 2 General requirements

15.07 Requirements for external loads

For subregulation 138.410 (2), the requirements set out in this Division are prescribed relating to the flight of an aircraft involving an external load operation, including for prescribed classes of such flights.

15.08 Helicopter external load operations at night over water, including SAR

- (1) For subregulation 138.410 (2), the operator and the pilot in command for an external load operation at night over water must ensure that the requirements set out in this section are met.
Note This includes a night SAR operation involving an auto-hover over water.
- (2) For the operation, the flight attitude, height, and position of the helicopter must be maintained by the following:
 - (a) monitoring the aircraft's instruments;
 - (b) reference to visible external objects.
- (3) For subsection (2), external objects are visible only if they are:
 - (a) visible because they are adequately illuminated by ground or celestial lighting; or
 - (b) visible through the use of NVIS in accordance with CAO 82.6 and this MOS.

- (4) Despite subsection (2), if the operation is a SAR operation with an auto-hover using a transition mode capability over water in accordance with Division 4 of Chapter 9, the flight attitude, height and position of the helicopter must be maintained by the following:
 - (a) monitoring the aircraft's instruments;
 - (b) monitoring the aircraft's navigation source data;
 - (c) monitoring the aircraft's autopilot and flight director SAR modes;
 - (d) reference to external objects, if any.

15.09 Approvals required for certain external load operations

- (1) This section applies to the following operators:
 - (a) an aerial work certificate holder;
 - (b) a limited aerial work operator.
- (2) An external load operation may be conducted over a populous area or a public gathering in accordance with section 13.09.
- (3) A Class C external load operation or a Class E external load operation must not be conducted unless the operator is an aerial work certificate holder who has CASA approval under regulation 138.025 for the particular operation.
- (4) For subsection (3), an application for written approval must be accompanied by the operator's:
 - (a) detailed risk assessment; and
 - (b) detailed safety case; and
 - (c) indication of how the applicable requirements of this Chapter would be complied with.

15.10 External load operations over an AWZ

An aerial work certificate holder must not conduct an external load operation in an AWZ over a populous area unless the aircraft's certificate of airworthiness permits it to operate over a populous area.

Note A limited aerial work operator is not permitted to conduct an external load operation over an AWZ that is over a populous area: see regulation 138.030.

15.11 External load operations at night

A rotorcraft of an aerial work certificate holder conducting an external load operation at night over water must be equipped:

- (a) as specified under Chapter 22 for rotorcraft IFR and NVIS operations; and
- (b) with lighting as specified under:
 - (i) Chapter 22 for rotorcraft IFR at night; and
 - (ii) for NVIS operations — the relevant provisions of CAO 82.6 and this MOS; and
 - (iii) section 22.07 as if it applied to the operation; and
- (c) with an approved intercommunication system which permits continuous communication between the FCMs and the air crew members.

Note A limited aerial work operator is not permitted to conduct an external load operation at night over water: see sections 9.03, 9.06 and 9.14.

15.12 Additional requirements for Class E external loads

- (1) The following additional requirements are prescribed relating to the flight of an aeroplane in a Class E external load operation by an aerial work certificate holder.
- (2) The operations manual must contain detailed external load instructions, procedures and requirements.
- (3) For a towing operation, the operator, and the pilot in command, must ensure that:
 - (a) the operation is conducted in VMC; and
 - (b) the route is such that any accidental or emergency release of the load will not cause a hazard to any person or property on ground that is within a populous area or a public gathering.
- (4) The operator, and the pilot in command, must ensure that a risk assessment, in accordance with the relevant requirements of Chapter 13, is carried out:
 - (a) before the flight commences; or
 - (b) for a series of flights in the same aircraft, over the same area, on the same day, with the same external load, and for the same purpose — before the first flight commences.

15.13 Towed and long loads must be jettisonable

- (1) This section applies to the following operators:
 - (a) an aerial work certificate holder;
 - (b) a limited aerial work operator.
- (2) For an aerial work operation that is the towing of a load outside the aeroplane, the operator and the pilot in command of the aeroplane must each ensure that the load is jettisonable.
- (3) For an aerial work operation that is the carriage of an external load that extends below the landing gear of a rotorcraft, the operator and the pilot in command of the rotorcraft must each ensure that the load is jettisonable.

CHAPTER 16 REQUIREMENTS FOR DISPENSING OPERATIONS

16.01 Application

This Chapter applies to the following operators:

- (a) an aerial work certificate holder;
- (b) a limited aerial work operator.

16.02 Dispensing operations to be in VMC

For subregulation 138.425 (2), an operator and the pilot in command must ensure that a dispensing operation is conducted only in VMC, unless the operation is:

- (a) cloud seeding conducted in IMC; or
- (b) dispensing in the course of an ESO for a surveillance or SAR operation that is carried out:
 - (i) by an aerial work certificate holder; and
 - (ii) in accordance with the procedures in the operator's operations manual.

Note An aerial application operation under regulation 137.010 of CASR is not a dispensing operation — see paragraph 138.010 (5) (e).

16.03 Requirements for dispensing operations

- (1) For subregulation 138.425 (2), an operator and the pilot in command must ensure that the requirements set out in this section are complied with for a dispensing operation over land or water.
- (2) The substance or object to be dropped or released in the dispensing operation must be carried:
 - (a) inside the aircraft; or
 - (b) in a manner specified in the AFM; or
 - (c) in a manner set out in the operator's operations manual.
- (3) The opening through which the substance or object is dropped must be such that, when dropped, the substance or object does not:
 - (a) damage any part of the aircraft; or
 - (b) affect the operation of any part of the aircraft.
- (4) The size to weight ratio of each individual object to be dropped must be such that, when released, the object immediately drops away from the aircraft.
- (5) The dimensions of the site on to which the substance or object is to be dropped (the **drop site**) must be such that there is no risk of the substance or object falling outside the site.
- (6) Subsection (5) does not apply to the following:
 - (a) an ESO; or
 - (b) the dropping of leaflets, liquids, powders or fine grains; provided that what falls outside the drop site does not create a hazard for persons or property anywhere.
- (7) A drop site must be cleared of all persons and livestock before a substance or object is dropped onto the site.

- (8) Subsection (7) does not apply if:
 - (a) a risk assessment, performed in accordance with Chapter 13, establishes that dropping the substance or object on the site, in the circumstances, does not constitute an unacceptable risk of injury or damage to any person, property or livestock on the site; or
 - (b) the operation is an ESO.
- (9) The dropping of a substance or object must be controlled by a task specialist.
- (10) The pilot in command of the aircraft may be the task specialist for the dropping but only if the pilot can perform the role:
 - (a) while remaining at all times in the normal flying crew position; and
 - (b) without in any way affecting the pilot's ability to control the aircraft normally.
- (11) During the dropping phase of a dispensing operation in which the pilot in command is not the task specialist:
 - (a) the pilot in command and the task specialist must maintain effective communication with each other; and
 - (b) the substance or object may only be dropped with the expressed consent of the pilot in command.

CHAPTER 17 REQUIREMENTS FOR TASK SPECIALIST OPERATIONS

Division 1 Preliminary

17.01 Application

Unless it provides otherwise, this Chapter applies to task specialist operations of the following operators:

- (a) an aerial work certificate holder;
- (b) a limited aerial work operator.

Division 2 Aerial mustering operations

17.02 Pilot qualifications and experience

- (1) This Division applies in relation to a task specialist operation that involves aerial mustering below 500 ft AGL (the *proposed aerial mustering*).
- (2) For paragraph 138.500 (1) (c), the pilot in command must have at least the following:
 - (a) 200 hours' experience as a pilot in the category of aircraft in which the proposed aerial mustering will be carried out, of which at least 100 hours must have been spent as pilot in command or pilot in command under supervision (PICUS);
 - (b) either:
 - (i) 100 hours' experience as a pilot in the type or class of aircraft in which the proposed aerial mustering will be carried out; or
 - (ii) if the pilot already has 100 hours' experience as a pilot in aerial mustering operations — 5 hours' experience as a pilot in the type or class of aircraft in which the proposed aerial mustering will be carried out;
 - (c) before commencing unsupervised operations as the pilot in command of an aircraft in an aerial mustering operation below 500 ft — 100 hours of operational training in aerial mustering operations in the category of aircraft in which the proposed aerial mustering will be carried out;
 - (d) for paragraph (c):
 - (i) at least 60 hours of the 100 hours must have been training as PICUS with the training pilot; and
 - (ii) the remaining hours may be either of the following, in the discretion of the training pilot:
 - (A) as PICUS with the training pilot; or
 - (B) solo under the detailed personal direction of the training pilot.
- (3) For subsection (1), but without affecting any applicable requirements under Chapter 23:

training pilot means a pilot who:

- (a) is qualified to conduct aerial mustering in the category and type of aircraft in which the proposed aerial mustering is to be conducted (the *relevant aircraft*); and

- (b) has at least the following experience conducting aerial mustering operations in the relevant aircraft:
 - (i) 2 000 hours' experience;
 - (ii) 4 years' experience and
- (c) for an operation by an aerial work certificate holder — is nominated by the holder to conduct the training.

Division 3 Firearms and aerial work operations

17.03 Application

- (1) This Division is for paragraph 138.432 (2) (b).
- (2) The operator and the pilot in command of an aircraft in an aerial work operation must each ensure that a firearm is not possessed or carried on the aircraft, or discharged by any person while on the aircraft, unless the applicable requirements of this Division are complied with.

17.04 Possession and carriage of a firearm

For a person to possess or carry a firearm on an aircraft where there is no intent or likelihood of the firearm being discharged, the following requirements apply:

- (a) the operator must have written procedures for the safe on-board storage of the firearm during the operation and the procedures must include the requirements of this section;
- (b) the procedures must require that the pilot in command is informed of, and consents to, a firearm being possessed or carried on the aircraft;
- (c) the pilot in command must be so informed and voluntarily consent, in accordance with paragraph (b);
- (d) the person who possesses or carries the firearm must be made aware of the procedures and, before boarding the aircraft, agree to comply with them;
- (e) before the aircraft takes off for the operation the requirements of this section and the operator's procedures must have been complied with.

17.05 Pilot requirements for aerial platform shooting

- (1) The pilot in command of the aircraft engaged in aerial platform shooting must:
 - (a) have been trained by the operator in the safe possession, carriage and discharge of firearms by a person while on an aircraft; and
 - (b) either:
 - (i) have documented experience as a pilot in aerial platform shooting operations; or
 - (ii) for the purpose of gaining such documented experience — have commenced, and be still engaged in, training which is conducted by a person who:
 - (A) meets the requirements in section 23.10 of this MOS; and
 - (B) has documented experience in aerial platform shooting operations.
- (2) The pilot in command of an aerial work certificate holder's aircraft is taken to meet the requirements of subparagraph (1) (b) (ii), if the pilot meets the requirements for gaining the relevant experience as set out in the operator's operations manual.

17.06 Task specialist requirements — discharge of firearms

- (1) For this section of the MOS, to be authorised to carry, otherwise possess, and discharge, a firearm for a particular task specialist operation in a particular category of aircraft, a task specialist must:
 - (a) be authorised to carry, otherwise possess and discharge the firearm by a law of the Commonwealth, the State or the Territory; and
 - (b) meet the requirements of this section.
- (2) The task specialist must have successfully completed a training course about the on-board storage, carrying, otherwise possessing, and discharging, of a firearm for the particular task specialist operation in the particular category of aircraft to be used in the operation.
- (3) For subsection (2), the training course must be:
 - (a) based on a written syllabus; and
 - (b) conducted by:
 - (i) the operator, in accordance with a firearms possession and use training program set out in the operator's operations manual; or
 - (ii) an aerial platform shooting training organisation whose course is accredited for this purpose by an authority of a State or Territory; and
 - (c) documented by the operator or the organisation (as the case may be) in records that must be retained in safe custody for at least 3 years after the training course was completed.
- (4) The task specialist must have a current certificate of competency, issued by the operator or the training organisation (as the case may be), certifying that, for 2 years from completion of the training course, the task specialist may safely carry the relevant firearm in, and may safely discharge the relevant firearm from, the category of aircraft used in the operation.
- (5) For animal culling operations, within the 2 years immediately before commencing the culling operation in a particular category of aircraft, the task specialist must have:
 - (a) discharged a firearm from an aircraft of the same category, for animal culling purposes; or
 - (b) successfully completed, for an aircraft of the same category:
 - (i) the training course mentioned in subsection (2); or
 - (ii) a refresher training course based on the training course mentioned in subsection (2).
- (6) For subparagraph (5) (b) (ii), subsections (2) and (3) apply to a refresher training course as if, in those subsections, references to "training course" were references to "refresher training course".

17.07 Firearm requirements

- (1) Before a firearm is discharged by a task specialist while on an aircraft in flight, a trial must be conducted by the pilot in command to ensure that the safe operation of the aircraft will not be affected by:
 - (a) the ejection of empty cartridge cases from the firearm; or
 - (b) the noise level of the firearm when fired.

- (2) For subsection (1), for an operation by an aerial work certificate holder:
 - (a) the operations manual must contain the procedures for the trial; and
 - (b) the holder must ensure that the pilot in command conducts a trial in accordance with the procedures.
- (3) Only a task specialist, authorised in accordance with subsection 17.06 (1), may operate the firearm.
- (4) The pilot in command must not assist in any way with the operation of the firearm.
- (5) For animal culling operations, the firearm must remain unloaded at all times during the flight, except when it is to be fired at an identified target for culling purposes.
- (6) Subject to subsection (7), for a licenced firearm which in normal operation is designed to eject spent cartridge cases, the ejection must be:
 - (a) downwards, and not more than 90 degrees back from the line of fire; or
 - (b) into a rigid container securely attached to the firearm.
- (7) If there is any risk that a cartridge (whether spent or not) may cause foreign object damage to any external or internal part of the aircraft on being ejected from a firearm, a collection case must be used to receive the ejected cartridge.
- (8) Any rigid container or collection case must be securely closed:
 - (a) during take-off and landing; and
 - (b) at any other time when the pilot in command directs.
- (9) An aerial work operation whose purpose involves the discharge of a firearm from an aircraft must not occur within 3 NM of any of the following:
 - (a) an occupied building;
 - (b) a populous area;
 - (c) a public gathering.

17.08 Communication requirements

An operation under this Division which involves the discharge of a firearm must not be conducted unless it is possible at all times during the operation for the pilot in command and the task specialist to audibly communicate with each other.

Note Communication may be face-to-face or through a serviceable handsfree intercom, but it must be possible and audible at all times. If communication ceases to be possible during the operation, the operation must cease immediately.

Division 4 Marine pilot transfer

17.09 Task specialist marine pilot transfer operations

- (1) This Division applies for a task specialist operation (the *operation*) that is:
 - (a) a marine pilot transfer; and
 - (b) operated at a distance greater than 10 NM from land.
- (2) For subregulation 138.430 (2), the operator and the pilot in command must each ensure that the requirements of this Division are complied with.

- (3) The rotorcraft used in the operation must:
 - (a) be flown by 2 pilots; or
 - (b) be fitted with a serviceable autopilot and flown by one or more pilots.

CHAPTER 18 PERFORMANCE – TAKE-OFF AND LANDING – AIRCRAFT

Division 1 Take-off and landing performance – large aeroplanes – all aerial work operations

18.01 Application

- (1) This Division applies to the following operators (relevant operators):
 - (a) an aerial work certificate holder; and
 - (b) a limited aerial work operator.
- (2) This Division applies only in relation to the operation by a relevant operator of the following aeroplanes (**large aeroplanes**):
 - (a) a propeller-driven, multi-engine aeroplane with an MTOW of more than 5 700 kg;
 - (b) a jet-driven, multi-engine aeroplane with an MTOW of more than 2 722 kg.

18.02 Take-off and landing performance for large aeroplanes

For subregulations 138.435 (2) and 138.440 (2), the prescribed requirements relating to take-off performance and landing performance for a flight of an aeroplane to which this Division applies are the requirements specified in Chapter 9 of the Part 121 MOS.

Division 2 Take-off and landing performance – rotorcraft – aerial work certificate holders only

18.03 Application

- (1) This Division applies only to an aerial work certificate holder (a **relevant operator**).
- (2) This Division applies only in relation to the operation by a relevant operator of any of the following rotorcraft:
 - (a) a multi-engine rotorcraft required to be operated with OEI accountability in accordance with this MOS;
 - (b) a single-engine rotorcraft operated with OEI accountability as defined in subsection 1.04 (6).

18.04 Take-off and landing performance for rotorcraft operated with OEI accountability

For subregulations 138.435 (2) and 138.440 (2), the prescribed requirements relating to take-off performance and landing performance for a flight of a rotorcraft to which this Division applies are the following:

- (a) for a relevant operator of a multi-engine rotorcraft who chooses to operate within the requirements of paragraph (a) of the definition of **OEI accountability** — the requirements specified in Chapter 11 of the Part 133 MOS;
- (b) for a relevant operator of a multi-engine rotorcraft who chooses to operate within the requirements of paragraph (b) or (c) of the definition of **OEI accountability** — the requirements specified in the rotorcraft flight manual, as applicable to the operation;

Note For the definition of **OEI accountability** for the flight of a multi-engine rotorcraft, see subsection 1.04 (6).

- (c) for an operator of a single-engine rotorcraft who chooses to operate within the requirements of paragraph (a) of the definition of **OEI accountability** — the requirements specified in Chapter 4 of the Part 133 MOS;
- (d) for an operator of a single-engine rotorcraft who chooses to operate within the requirements of paragraph (b) or (c) of the definition of **OEI accountability** — the requirements specified in the rotorcraft flight manual, as applicable to the operation.

Note For the definition of **OEI accountability** for the flight of a single-engine rotorcraft, see subsection 1.04 (6).

Division 3 Take-off and landing performance – other aircraft – all aerial work operations

18.05 Application

- (1) This Division applies to the following operators (a **relevant operator**):
 - (a) an aerial work certificate holder;
 - (b) a limited aerial work operator.
- (2) This Division applies only in relation to the operation by a relevant operator of an aircraft to which Division 1 or Division 2 does not apply.

18.06 Take-off and landing performance for other aircraft

For subregulations 138.435 (2) and 138.440 (2), the prescribed requirements relating to take-off performance and landing performance for a flight of a relevant operator's aircraft to which this Division applies are the requirements specified in the following:

- (a) Chapters 24 and 25 of the Part 91 MOS (the **Chapters**) as if:
 - (i) the contents of each of the Chapters were incorporated into this section; and
 - (ii) references in the contents of the Chapters to any provision of Part 91 or the Part 91 MOS were deleted; and
 - (iii) the contents of the definition of any expressions used in either of the Chapters, as set out in subsection 1.07 (6) of the Part 91 MOS, were incorporated into this section with any references to Part 91, or the Part 91 MOS, deleted;
- (b) the AFM.

CHAPTER 19 RESERVED

CHAPTER 20 RESERVED

CHAPTER 21 WEIGHT AND BALANCE

21.01 Application

This Chapter applies only to an aerial work certificate holder.

21.02 Procedures for loading aircraft — document carriage

For subregulation 138.460 (2), the operator must ensure that when the flight of an aircraft begins:

- (a) the aircraft is carrying completed weight and balance documents; and
- (b) copies of the documents are available to CASA on request.

Note 1 The expression **weight and balance documents** is defined in the CASR Dictionary.

Note 2 Weight and balance documents should be retained by the operator in safe custody for at least 3 months after the flight.

21.03 Weight and balance documents

- (1) For subregulation 138.460 (1), this section prescribes:
 - (a) the weight and balance documents that are required for a relevant aircraft used in an aerial work operations; and
 - (b) requirements in relation to those documents.
- (2) For paragraph (1) (a), a load sheet, or other weight and balance document is required.
- (3) For paragraph (1) (b), the load sheet or other weight and balance document must be:
 - (a) as described in the operator's operations manual; and
 - (b) suitable to perform the function of a load sheet for the operations.
- (4) In this section:

load sheet means a form for recording:

- (a) the weight and disposition of the disposable load on the relevant aircraft; and
- (b) other loading information relevant for the operation.

relevant aircraft means an aircraft with a MTOW exceeding 5 700 kg, but not an aircraft which, for design reasons, is demonstrably impossible to load in a manner that ensures that its centre of gravity would fall outside the approved range during the aerial work operation.

CHAPTER 22 EQUIPMENT

22.01 Application

- (1) Unless it provides otherwise, this Chapter applies to the following operators:
 - (a) an aerial work certificate holder;
 - (b) a limited aerial work operator.

22.02 Purpose

This Chapter prescribes requirements for the purposes of subregulation 138.465 (2).

22.03 Approval of equipment

- (1) Before a registered aircraft begins a flight, any equipment that is required to be fitted to, or carried on, the aircraft for the operation under a Part of the CASR or under this Chapter, must be compliant with the requirements of, or approved under, Part 21 of CASR.
- (2) Subsection (1) does not apply to survival equipment, including signalling equipment, carried under section 22.08.
- (3) Before a foreign-registered aeroplane begins a flight in Australian airspace, the equipment required by this Chapter to be fitted to, or carried on, the aircraft must have been approved by the NAA of the aeroplane's State of registry.
- (4) If equipment is fitted to, or carried on, an aircraft although not required by this Chapter to be so fitted or carried, then:
 - (a) the equipment need not have been compliant with the requirements of, or approved under, Part 21 of CASR; and
 - (b) for a foreign-registered aeroplane — the equipment need not have been approved by the NAA of the aircraft's State of registry; and
 - (c) no information provided by the equipment may be used by the flight crew to comply with any requirement of this Chapter in relation to equipment that is required to be fitted or carried for communications or navigation; and
 - (d) the equipment, whether functional or otherwise, must not at any time affect the safety of the operation or the airworthiness of the aircraft.

22.04 Visibility and accessibility of equipment

- (1) This section applies in relation to equipment that is required for the operation under a Part of the CASR or under this Chapter, to be fitted to, or carried on, an aircraft.
- (2) Equipment that is required for a pilot's manual or visual use in, or from, the cockpit must be visible to, and usable by, the pilot from the pilot's seat in the aircraft.
- (3) Emergency equipment that is required to be fitted to, or carried on, an aircraft for a flight must be easily accessible for immediate use in the event of an emergency.
- (4) Unless the contrary intention appears in a particular provision:
 - (a) a reference to a pilot seeing or viewing anything from a pilot's seat is taken to mean that the thing is seen or viewed from the pilot's normal sitting position in the seat; and
 - (b) any mention of feet (or ft) in the context of an altitude is taken to mean feet above mean sea level (AMSL), unless otherwise stated.

22.05 Flight with inoperative equipment

- (1) Subject to subsection (2), an aircraft may begin a flight with equipment, required under this Chapter, inoperative for the flight.
- (2) Subsection (1) applies only if the aircraft is operated:
 - (a) in accordance with the minimum equipment list (MEL) approved for the aircraft for the flight in accordance with regulation 91.935; or
 - (b) if the equipment is inoperative because of a defect that has been approved as a permissible unserviceability for the aeroplane for the flight in accordance with regulation 21.007 of CASR — in accordance with the permissible unserviceability

22.06 Marine pilot transfers — usage monitoring system for single-engine rotorcraft

- (1) With effect from the beginning of 2 December 2023, the pilot in command of a single-engine rotorcraft conducting an aerial work operation that is the transfer of a marine pilot must not conduct the operation unless the rotorcraft is equipped in accordance with the requirements of this section.
- (2) The rotorcraft must be fitted with a usage monitoring system which:
 - (a) is continuously operating when the rotorcraft is operational; and
 - (b) records and stores data related to the rotorcraft's time-in-service, engines, transmission and rotor systems.

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

- (3) The usage monitoring system must reliably, accurately and comprehensively record data which when downloaded will show the following:
 - (a) time-in-service;
 - (b) operational parameters for the critical engine, and the transmission and rotor systems;
 - (c) all exceedances of the operational parameters mentioned in paragraph (b).
- (4) The usage monitoring system must have a capability to retain all of the recorded data mentioned in subsection (3), whether for a single flight or a series of flights, until the data can be downloaded and safely stored by the operator for use, as necessary, in managing the aircraft's continuing airworthiness requirements.

22.07 Searchlights and intercommunication system for aerial work operations at night

- (1) The pilot in command of a rotorcraft conducting an aerial work operation that is an SAR operation at night that involves winching and rappelling must not conduct the operation unless the rotorcraft is equipped in accordance with the requirements of this section.
- (2) For a winch and rappelling operation at night, the rotorcraft must be equipped with the following:
 - (a) at least 1 searchlight (the **main searchlight**) that may be operated, and trained in azimuth and elevation, by the pilot in command whose hands remain on the flying controls;
 - (b) at least 1 additional searchlight that may be safely operated, and would provide adequate hover reference, if the main searchlight becomes unserviceable;

- (c) an intercommunication system, compliant with the requirements of, or approved under, Part 21 of CASR, that permits continuous communication between all crew members.
- (3) At least one of the searchlights mentioned in subsection (2) must be a visible-spectrum searchlight.
- (4) If infrared technology is fitted as one of the searchlights mentioned in subsection (2) — the rotorcraft landing light must be positioned to provide hover cues in the event that the visible-spectrum searchlight becomes unserviceable.

Note See also Chapters 9 and 12 of this MOS and the requirements for NVIS operations in CAO 82.6.

22.08 Carriage of survival equipment etc.

- (1) Before an aircraft begins an aerial work operation, the aerial work operator must ensure that the aircraft complies with subsection (2).
- (2) For subregulation 138.465 (2), the aircraft must carry such serviceable survival and signalling equipment as is reasonably appropriate for each person onboard the aircraft, in the event of a forced landing, to survive the surface conditions of any area over which the operation will be conducted.
- (3) Subsection (1) does not apply if:
 - (a) throughout the operation, the pilot in command is able to maintain continuous radio contact with:
 - (i) ATS; or
 - (ii) the aircraft operator, or the operator's representative; or
 - (b) the aircraft's position is continuously monitored on the ground through an automatic continuous tracking system fitted to the aircraft.

CHAPTER 23 FLIGHT CREW TRAINING AND CHECKING

Division 1 Flight crew training and checking events

23.01 Application

- (1) This Division applies only to an aerial work certificate holder (an *operator*) whether or not regulation 138.125 applies to the operator.
- (2) For subregulation 138.475 (3), this Division prescribes the requirements relating to training and checking that must be completed by an FCM of an operator, for a flight.
- (3) Each requirement set out in this Division for an FCM is a training and checking requirement for subsection (2).

Note Paragraph 138.155 (1) (h) requires aerial work certificate holders to include in their operations manuals the details of each plan, process, procedure, program and system implemented by the holder to safely conduct and manage aerial work operations in compliance with the civil aviation legislation.

23.02 General emergency training and competency

- (1) The requirements of this section must be met before a person acts as an FCM for a flight.
- (2) The FCM must complete general emergency training that includes the following:
 - (a) general emergency and survival procedures;
 - (b) aircraft evacuation procedures;
 - (c) procedures for dealing with specific emergency situations;
 - (d) locating, accessing, and using the emergency equipment and survival equipment on the aircraft;
 - (e) for a flight that requires life rafts to be carried:
 - (i) where the flight is in an aeroplane — training in ditching procedures, and training, including in-water practical training, in the use of life jackets and life rafts; and
 - (ii) where the flight is in a rotorcraft — training in ditching procedures, and training, including in-water practical training, in underwater escape and the use of life jackets and life rafts;
 - (f) for a flight to which paragraph (e) does not apply but that requires life jackets to be carried or worn:
 - (i) where the flight is in an aeroplane — training in ditching procedures, and training, including in-water practical training, in the use of life jackets; and
 - (ii) where the flight is in a rotorcraft — training in ditching procedures, and training, including in-water practical training, in underwater escape and the use of life jackets.
- (3) The FCM must:
 - (a) subject to paragraph (b), successfully complete a competency check for the operator that covers at least all of the matters mentioned in subsection (2) (as applicable); and

- (b) for paragraph (a), successfully complete the check in relation to each kind of aircraft in which the FCM is to conduct operations as an FCM for the operator.
- (4) The successful completion of a competency check for the operator under and for this section is the first previous operator proficiency check for an FCM for the purposes of subsection 23.05 (2).

23.03 Conversion training and proficiency checks

- (1) The requirements of this section must be met before a person acts as an FCM for a flight without the direct supervision of a person who meets the requirements of paragraph 138.505 (2) (a) or (b).
- (2) The FCM must complete conversion training that includes the following:
 - (a) training in the duties and responsibilities for the FCM's position;
 - (b) training in the procedures relating to the operator's operations;
 - (c) training in the standard operating procedures for the aircraft used for the flight;
 - (d) normal and emergency procedures for the kind of aircraft used for the flight;
 - (e) training specific to the kind of aerial work operation being conducted during the flight;
 - (e) if the FCM will be conducting operations that involve the carriage of aerial work passengers — training in the conduct of an aerial work passenger briefing and safety demonstration for the kind of aircraft being used for the flight.
- (3) The FCM must:
 - (a) subject to paragraph (b), successfully complete a proficiency check for the operator that covers at least all of the matters mentioned in subsection (2); and
 - (b) for paragraph (a), successfully complete the check in relation to each kind of aircraft in which the FCM is to conduct operations as an FCM for the operator.
- (4) The successful completion of a proficiency check for the operator under and for this section is the first previous operator proficiency check for an FCM for the purposes of subsection 23.05 (2).

23.04 Differences training requirements

The FCM must complete the relevant differences training for a flight in accordance with paragraph 61.200 (e) of CASR.

Note An FCM's receipt of a relevant course completion certificate is evidence of the FCM's completion of the requirement. In the context of section 23.01, the intent of this requirement is to place an obligation on the operator to ensure that the FCM has completed any differences training required by Part 61. See subsection 23.01 (3).

23.05 Recurrent training and checking requirements

- (1) The FCM must complete recurrent training and checking for a flight of the operator's aircraft in accordance with this section.

- (2) Recurrent training and checking for the general emergency training matters mentioned in subsection 23.02 (2) must occur at the following intervals:
 - (a) subject to paragraph (b) — at intervals of not more than 12 months after the previous operator competency check covering the matters mentioned in subsection 23.02 (1);
 - (b) for life jackets, life rafts or underwater escape — at intervals of not more than 3 years after the previous operator competency check for life jackets, life rafts or underwater escape.
- (3) Recurrent operator proficiency checks, which demonstrate that the FCM is competent to carry out the FCM's duties for the flight, must occur at the following intervals:
 - (a) for an FCM of an operator who is not required to have a training and checking system under regulation 138.125 — at intervals of not more than 12 months after the previous operator proficiency check;
 - (b) for an FCM who only flies under the VFR by day for an operator who is required to have a training and checking system under regulation 138.125 — not more than 6 months after first commencing unsupervised line operations for the operator and then at intervals of not more than 12 months after the previous operator proficiency check;
 - (c) for an FCM who flies under the IFR or the NVFR for an operator who is required to have a training and checking system under regulation 138.125 — at intervals of not more than 6 months after the previous operator proficiency check.
- (4) A check of proficiency required under this section to be completed at intervals of 12 months or 3 years, is deemed to have been completed on its due date if the check is successfully completed within the 90 days before or after its due date.
Note Thus, the due date does not alter.
- (5) A check of proficiency required under this section to be completed at intervals of 6 months, is deemed to have been completed on its due date if the check is successfully completed within the 30 days before or after its due date.
Note Thus, the due date does not alter.
- (6) An FCM who fails to demonstrate proficiency or competency, or continuing proficiency or competency, for this section must not conduct a flight unless:
 - (a) the FCM is directly supervised by a person who meets the requirements of paragraph 138.505 (2) (a) or (b); or
 - (b) the FCM has met the remedial training requirements in section 23.06.

Note An operator commits an offence if the operator assigns to duty for a flight an FCM who has not been assessed as competent to perform the assigned duties in accordance with the operator's operations manual: see regulation 138.485.

23.06 Remedial training and checking requirements

- (1) This section applies if an FCM fails an operator proficiency check for an aerial work operation, for an operator, in a specific kind of aircraft.
- (2) Before being assigned to duty as an FCM for a flight in the relevant kind of aircraft, the FCM must:
 - (a) successfully complete a program of remedial training in relation to the matters in which the FCM failed to demonstrate competency, as identified in the operator proficiency check result; and

- (b) then successfully complete an operator proficiency check for the specific kind of aircraft; and
- (c) then have the status of an FCM eligible to carry out an unsupervised aerial work operation flight in the specific kind of aircraft, reinstated by the operator, or by another operator who is aware of the circumstances mentioned in subsection (1).

Division 2 Qualification as pilot in command

23.07 Application

- (1) This Division applies to the following operators:
 - (a) an aerial work certificate holder, whether or not subregulation 138.125 (1) applies to the holder;
 - (b) a limited aerial work operator.
- (2) For paragraph 138.500 (1) (c), this Division prescribes the qualifications and experience a pilot in command must have for a flight for an operator.

23.08 Specific qualifications and experience

- (1) For an external load operation that involves a Class D external load in the form of a person suspended from a belly hook, the pilot in command must have at least the following:
 - (a) 1 000 hours total rotorcraft flight time;
 - (b) 50 hours on the particular rotorcraft type to be used in the operation;
 - (c) 100 hours in vertical reference operations;
 - (d) successfully completed an approved training program for proficiency in sling load operations requiring the carriage of persons (**relevant proficiency**);
 - (e) a certificate of relevant proficiency issued by an approved person.
- (2) For subsection (1):

approved person means:

 - (a) a training and check pilot in accordance with Division 3; or
 - (b) the operator's head of operations or another pilot provided that such person:
 - (i) is competent in imparting Class D external load operation training for picking up, carrying and releasing persons suspended from a belly hook (the **relevant activity**); and
 - (ii) has, for the purposes of this subparagraph, applied to CASA for, and been granted, an authorisation, under and for the purposes of this subparagraph, to conduct the relevant activity; or

Note Subparts 11.B and 11.BA of CASR apply for applications and grants. CASA will require an applicant to complete a test under regulation 11.035 of CASR to demonstrate competency in imparting relevant training for the relevant activity. CASA will provide the person with CASA's written assessment of the demonstration.
 - (c) a person who is competent in imparting Class D external load operation training for picking up, carrying, and releasing persons suspended from a belly hook (the **relevant activity**), and who also:
 - (i) holds the training endorsement mentioned in column 1 of item 16 of Table 61.1235 of CASR; and

- (ii) has, for the purposes of this subparagraph, applied to CASA for, and been granted, an authorisation, under and for the purposes of this subparagraph, to conduct the relevant activity.

Note Subparts 11.B and 11.BA of CASR apply for applications and grants. CASA will require an applicant to complete a test under regulation 11.035 of CASR to demonstrate competency in imparting relevant training for the relevant activity. CASA will provide the person with CASA's written assessment of the demonstration.

- (3) For an aerial work operation that is a marine pilot transfer, the pilot in command must have the qualifications and experience specified by the operator in relation to the following matters:
 - (a) the relevant supervised day and night training;
 - (b) the relevant minimum number of supervised day and night transfers;
 - (c) the relevant minimum number of supervised day and night shipboard landings and take-offs;
 - (d) the relevant recent aeronautical experience in marine pilot transfer operations.

Division 3 Individuals who conduct training and checking

23.09 Application

- (1) This Division applies only to an aerial work certificate holder (the *operator*).
- (2) For subparagraph 138.505 (2) (a) (ii), this Division prescribes the requirements for an individual mentioned in paragraph (a) of the definition of *approved person* in Division 2 (the *relevant trainer or checker*) to conduct the training or check mentioned in Division 1.

Note 1 This Division applies only to an FCM of an aerial work certificate holder due to subregulation 138.005 (3).

Note 2 Paragraph 138.155 (1) (h) requires an aerial work certificate holder to include in the operations manual the details of each plan, process, procedure, program and system implemented by the operator to safely conduct and manage aerial work operations in compliance with the civil aviation legislation.

Note 3 For any training or competency assessment of an FCM that is to be relied upon by the FCM for the issue or revalidation of a qualification under Part 61 of CASR, the person conducting the training or competency assessment must:

- (a) be the holder of the same qualification under Part 61; and
- (b) meet any additional requirements prescribed in Part 61 for the issue or the revalidation.

23.10 Requirements for individuals conducting training and checking

- (1) For an operator who is not required to have a training and checking system under regulation 138.125 — a relevant trainer or checker must be:
 - (a) the operator's head of operations — provided that person satisfies the operator's requirements to perform a training or a competency assessment role; or
 - (b) an individual who is authorised by Part 61 to conduct the training or competency assessment.

- (2) For an operator who is required to have a training and checking system under regulation 138.125 — a relevant trainer or checker must:
 - (a) meet the minimum experience and entry control requirements for a training pilot, a check pilot, or a training and check pilot (as the case may be, hereafter ***training and check pilot***); and
 - (b) complete the training program for a training and check pilot; and
 - (c) meet the relevant recency or proficiency requirements for the aerial work operation that is the subject of the training and checking, as set out in the operator's operations manual and in CAR and CASR; and
 - (d) be nominated in writing by the operator to be a training and check pilot for the operator's training and checking system (a ***nominated individual***).
- (3) For paragraph (2) (d), the nomination must be in the operator's operations manual and state that the individual meets the requirements set out in paragraphs (2) (a), (b) and (c) (as applicable).

23.11 CASA may test nominated individuals

- (1) This section is for paragraph 23.10 (2) (d).
- (2) CASA may, at any reasonable time, test a nominated individual in order to be satisfied of the individual's competency to perform the role of a relevant trainer or checker (the ***nominated role***).
- (3) For subsection (2), CASA must give the nominated individual a written notice if CASA requires that the individual must undertake a test of knowledge, skill or competence relevant to the nominated role.

Note If CASA conducts an assessment of an individual and determines that the individual should not be permitted to conduct training or checks, then CASA has the ability under Subpart 11.G of CASR to direct an individual to undertake further training before commencing or continuing in the training or checking role.

- (4) The time and location of the test specified in a notice under subsection (3) must be reasonable in the circumstances.
- (5) CASA must give the nominated individual a copy of the record of any test, including the testing officer's assessment of individual's competence during the test.

CHAPTER 24 AIR CREW MEMBER TRAINING AND CHECKING

24.01 Application

- (1) This Chapter applies in relation to the training and checking of an air crew member of the following operators:
 - (a) an aerial work certificate holder;
 - (b) a limited aerial work operator.
- (2) All air crew member training and checking must be conducted by an aerial work certificate holder to whom subregulation 138.125 (1) applies.

Note Under subregulation 138.550 (2), the training or checking of an air crew member must be done by an individual who meets the requirements of this Chapter. Through the combined effect of paragraph 138.125 (1) (c) of these Regulations and paragraph 4.02 (1) (c) of this MOS, certain operators, who are, in effect, aerial work certificate holders, must have a formal training and checking system if they are conducting the training or checking of air crew members.

24.02 Training and proficiency checks, recurrent proficiency check requirements and general emergency competency

For subregulation 138.540 (3), sections 23.02, 23.03, 23.05 and 23.06 apply to the operator as if references in the sections to an FCM were references to an air crew member, except that in paragraph 23.05 (3) (c) mention of 6 months is taken to be 12 months.

24.03 Who is to conduct training and checking

- (1) For paragraph 138.550 (2) (b), the training and checking undertaken by an air crew member for any of the following:
 - (a) an aerial work certificate holder's aerial work operation;
 - (b) a limited aerial work operator;must be conducted by an individual who meets the requirements set out in subsection (2).

Note See also subsection 24.01 (2).
- (2) For subsection (1), the individual must:
 - (a) meet the minimum experience and entry control requirements for a training air crew member, a check air crew member, or a training and check air crew member (*air crew trainer and/or checker, as the case may be*) as set out in the operator's operations manual; and
 - (b) complete the training program for an air crew trainer and/or checker, as the case may be, as set out in the operator's operations manual; and
 - (c) meet the relevant recency requirements for the aerial work operation that is the subject of the training and checking, as specified in the operator's operations manual; and
 - (d) be nominated in writing by the operator to be an air crew trainer and/or checker, as the case may be for the operator's training and checking system (a *nominated individual*).
- (3) For paragraph (2) (d), the nomination must:
 - (a) be in:
 - (i) an operations manual entry; or
 - (ii) some other document that is provided to CASA; and

- (b) state that the individual meets the requirements set out in paragraphs (2) (a), (b), (c) and (d).

24.04 CASA may test nominated individuals

- (1) This section is for paragraph 24.03 (2) (d).
- (2) CASA may, at any reasonable time, test a nominated individual in order to be satisfied of the individual's competency to perform the role of a relevant air crew trainer and/or checker, as the case may be (the *nominated role*).
- (3) For subsection (2), CASA must give the nominated individual a written notice if CASA requires that the individual must undertake a test of knowledge, skill or competence relevant to the nominated role.

Note If CASA conducts an assessment of an individual and determines that the individual should not be permitted to conduct training or checks, then CASA has the ability under Subpart 11.G of CASR to direct an individual to undertake further training before commencing or continuing in the training or checking role.

- (4) The time and location of the test specified in a notice under subsection (3) must be reasonable in the circumstances.
- (5) CASA must give the nominated individual a copy of the record of any test, including the testing officer's assessment of individual's competence during the test.

CHAPTER 25 TASK SPECIALIST TRAINING AND CHECKING

25.01 Application

Unless it provides otherwise, this Chapter applies to the following (an *operator*):

- (a) an aerial work certificate holder; and
- (b) a limited aerial work operator.

25.02 Required training and checking

- (1) For subregulation 138.580 (3), the operator must ensure that, before performing unsupervised duties on a flight (the *relevant duties*), a task specialist is competent in carrying out the operator's normal, abnormal and emergency procedures for the aircraft and the operation that are relevant to the task specialist's duties for the flight (the *relevant procedures*).

Note The competency check in a simple operation may take the form of a pre-flight briefing by the pilot in command. But the operator should be satisfied that such a briefing can adequately cover the relevant procedures, and that the task specialist is competent to carry out them out.

- (2) The relevant procedures must be:
 - (a) appropriate to:
 - (i) the nature, size and complexity of the aircraft and the operation; and
 - (ii) the nature and complexity of the relevant duties; and
 - (b) for an aerial work certificate holder — set out in the holder's operations manual; and
 - (c) for a limited aerial work operator — communicated by the pilot in command in a pre-flight briefing.

- (3) In this section:

unsupervised means not supervised by a person who meets the requirements mentioned in section 25.03 or 25.04, as applicable.

25.03 Conduct of training and checking by an aerial work certificate holder

- (1) For subregulation 138.580 (3), this section applies to an aerial work certificate holder whether or not subregulation 138.125 (1) applies to the holder.

Note Under subregulation 138.125 (1), certain aerial work certificate holders must have a formal training and checking organisation.

- (2) For paragraph 138.590 (2) (b), the training and checking undertaken by a task specialist for an aerial work operation must be conducted by an individual who meets the requirements set out in subsection (3).
- (3) For subsection (2), the individual must have met the minimum experience and entry control requirements for a task specialist trainer, or a task specialist checker, or a task specialist trainer and checker, as set out in the operator's operations manual.

25.04 Conduct of training and checking by a limited aerial work operator

- (1) This section applies to a limited aerial work operator.
 - (2) For paragraph 138.590 (2) (b), the training and checking undertaken by a task specialist for a limited aerial work operation must be such as to satisfy the pilot in command of the aircraft for the operation that, when combined with a pre-flight briefing by the pilot, the task specialist is competent to carry out all relevant procedures for the flight.
-