



*An Acceptable Means of Compliance (AMC) explains how one or more requirements of the Civil Aviation Safety Regulations 1998 (CASR) for the issue of a certificate, licence, approval or other authorisation, can be met by an individual or organisation applying to the Civil Aviation Safety Authority (CASA) for the authorisation.*

*AMC are non-binding advisory documents issued by CASA which may be used by persons and organisations to achieve compliance with CASR.*

*Applicants are not required to utilise an AMC to comply with a legislative requirement but if they do, CASA will issue the authorisation to which the AMC relates.*

*AMC do not articulate the only way compliance can be achieved. Individuals and operators may, on their own initiative, propose other ways of meeting the requirements of CASR; however, any such proposal will be subject to separate assessment by CASA to determine whether the proposed methods are likely to produce the required legislative outcome.*

*Guidance material (GM) is non-binding material issued by CASA which helps to illustrate the meaning of a requirement or specification in CASR. It provides explanations of the CASR and sometimes an amplification of the policy intention underpinning the applicable provision of CASR, rather than a means of complying with it. GM should be read in conjunction with the applicable provision of CASR and AMC. GM is identified by grey shaded text.*

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# Status

This version of the AMC and GM is approved by Branch Manager, Flight Standards.

**Note:** Changes made in the current version are annotated with change bars.

Version	Date	Details
v2.4	December 2023	Added a 4th AMC for 138.195 relating to operators listing in their operations manual the non-CASR, non-MOS legal instruments they rely upon when writing their exposition, and added a cross-referenced AMC to 138.155.
v2.3	September 2023	Added information about forms. Added information regarding the legal instruments which determine that training and checking events completed prior to the commencement of Part 138 are taken to have met certain new training and checking requirements. Added information to GM 138.015 regarding pilots simultaneously being the task specialist. Added information into GM 138.350 and GM 138.425 regarding the existence of a CASA TMI on aeroplane NVIS. Added information regarding approvals mentioned in CASA exemptions and directions instruments and how these relate to the significant change approval rules. Modified wording of the HOTC GM entries for increased clarity. Also added information to GM 138.305 about aerial work passengers and linking to AC 138-01 guidance.
v2.2	December 2021	Added references to additional exemptions incorporated into EX86/21 by EX151/21. Added reference to the exemption and transitional approvals arising from CASA EX161/21. Added more advisory material to the References section.
v2.1	December 2021	Added references and entries related to recently made exemptions. Addition of new guidance material. Additional guidance relating to alternate key persons in GM 138.062 and GM 138.075.
v2.0	October 2021	Addition of new guidance material, clarification of policy matters and editorial changes.
v1.0	December 2020	Initial AMC and GM.

# 1 Reference material

## 1.1 Acronyms

The acronyms and abbreviations used in this AMC and GM are listed in the table below.

Acronym	Description
AC	advisory circular
AMC	acceptable means of compliance
AMSA	Australian Maritime Safety Authority
AOC	Air Operator's Certificate
ATC	air traffic control
ATS	air traffic services
ATSB	Australian Transport Safety Bureau
AWC	aerial work certificate
AWK	aerial work
CAAP	Civil Aviation Advisory Publication
CAO	Civil Aviation Order
CAR	<i>Civil Aviation Regulations 1988</i>
CASA	Civil Aviation Safety Authority
CASR	<i>Civil Aviation Safety Regulations 1998</i>
CEO	Chief Executive Officer
CofA	Certificate of Airworthiness
ESO	emergency service operation
EVS	enhanced vision systems
FCM	flight crew member
GM	guidance material
HOO	Head of Operations
HUD	head-up display
HOTC	Head of Training and Checking
IFR	instrument flight rules
MEL	minimum equipment list
MOS	Manual of Standards
MTOW	maximum take-off weight
NVIS	night vision imaging system
PED	portable electronic device







Document	Title
AC 1-02	Guide to the preparation of expositions and operations manuals
AC 1-03	Transitioning to the flight operations regulations
AC 11-03	Electronically formatted certifications, records and management systems
AC 11-04	Approvals under CASR Parts 91, 103, 119, 121, 129, 131, 132, 133, 135, 138 and 149 (including MOS)
AC 91-07	Cabin electronic flight bags
AC 91-15	Guidelines for aircraft fuel requirements
AC 91-17	Electronic flight bags
AC 91-19, 121-04, 133-10, 135-12 and 138-10	Passenger safety information
AC 91-22	Aircraft checklists
AC 91-25	Fuel and oil safety
AC 91-28	Crew safety during turbulence
AC 91-29	Guidelines for helicopters - suitable places to take-off and land
AC 121-05, 133-04 and 135-08	Passenger, crew and baggage weights
AC 133-01	Performance class operations
AC 133-02	Performance Class 2 with exposure operations
AC 133-03	Performance Class 3 operations over populous areas
AC 138-01	Part 138 Core concepts
AC 138-05	Risk management for aerial work operators <b>Note:</b> This includes guidance for both aerial work certificate holders and those operators conducting aerial work operations without being required to hold an aerial work certificate.
AC 139.R-01	Guidelines for heliports - design and operation <b>Note:</b> This AC contains modernised content that was previously in CAAPs 92-2(2) and 92-4(0).
CAAP 48-01	Fatigue management for flight crew members
Part 91 PEG	General operating and flight rules - plain English guide
Part 91 AMC/GM	Acceptable means of compliance and guidance material - general operating and flight rules
Part 119 AMC/GM	Acceptable means of compliance and guidance material - Australian air transport operators—certification and management
Part 121 AMC/GM	Acceptable means of compliance and guidance material - Australian air transport operations—larger aeroplanes
Part 133 AMC/GM	Acceptable means of compliance and guidance material - Australian air transport operations—rotorcraft
Part 135 AMC/GM	Acceptable means of compliance and guidance material - Australian air transport operations—smaller aeroplanes





The key reason for a Part 138 rule to differ from a Part 91 rule is when the specialised nature of aerial work operations makes it necessary to enable them to be conducted. Additionally, Part 138 rules aim to manage risks associated with aerial work operations to provide additional protection to crew and people on the ground. In considering the Part 138 requirements, an operator will need to consider the conditions and requirements of both the regulations and the MOS.

A non-aerial work flight must comply with the rules in Part 91. For example, after conducting an aerial work operation the aircraft needs to be flown to the home base, a maintenance base, or another aerodrome to be refuelled. That flight is not an aerial work operation and, therefore, is considered a Part 91 operation.

#### *Relationship to Parts 141 and 142*

Part 141 of CASR deals with the conduct of recreational, private and commercial pilot flight training, other than certain integrated training courses, and Part 142 of CASR deals with the conduct of integrated and multi-crew pilot flight training, contracted training and contracted checking.

In the conduct of some of these activities, Part 141 and Part 142 operators may also be required to conduct aerial work operations as an element of their Part 141 or 142 activity.

Some examples of this are:

- a Part 141 operator conducting actual mustering of cattle during the flight training elements of a pilot's training for the issue of an aerial mustering—helicopter or aeroplane endorsement to their low-level rating.
- Note:** This example does not include simulated aerial mustering operations with no cattle involved, where no aerial work operation is being carried out.
- a Part 141 operator conducting an external load winching operation during the flight training elements of a pilot's training for the issue of a winch and rappelling operations endorsement to their low-level rating.
  - a Part 142 operator conducting an external load winching operation during the training and checking elements of a pilot's training and checking for the purposes of providing contracted training and checking for another operator.

As described above, all aerial work operations, whether or not the operation is required to be conducted by an AWC holder, are regulated by Part 138 in addition to Part 91. This is also the case with respect to the authority to conduct an aerial work operation. Therefore, if a Part 141 or Part 142 of CASR flying training operator intends to conduct aerial work operations, they must be appropriately authorised by Part 138 of CASR to do so.

This is further emphasised by subregulation 138.030(1) of CASR, which provides an offence if a person conducts an aerial work operation (other than an aerial work operation covered by subregulation 138.030(2) of CASR); and the person does not hold an AWC that authorises the person to conduct the operation.

It is highly unlikely a Part 141 or 142 operator would meet the criteria outlined in subregulation 138.030(2) of CASR. Therefore, the relevant Part 141 or Part 142 operator is

required to hold (in addition to their Part 141 certificate or Part 142 AOC) an aerial work certificate that authorises the operator to conduct the aerial work operation.

Further to this, the aerial work operation must also be conducted in accordance with Part 138 of CASR's requirements for the conduct of the aerial work operation, including the requirements outlined in the Part 138 Manual of Standards (MOS).

For additional information, see further guidance material for regulation 138.030 of CASR.

#### *Subregulation 138.005(2)*

This subregulation provides relief from the requirements of Part 138 for search and rescue, police, national security or customs operations in circumstances where it is reasonable that the regulations should not apply.

This is a relief provision of last resort and should only be used in circumstances where the risk of not complying with a requirement in Part 138 is outweighed by an urgent and imminent threat to life.

Aircraft operators should note that, even when this subregulation is relied on, section 20A of the Civil Aviation Act 1988 (the Act) continues to apply in all circumstances. This section of the Act states:

#### **20A Reckless operation of aircraft**

- (1) A person must not operate an aircraft being reckless as to whether the manner of operation could endanger the life of another person.
- (2) A person must not operate an aircraft being reckless as to whether the manner of operation could endanger the person or property of another person.

#### *Search and rescue*

The terms 'search' and 'rescue' are defined separately in subsection 1.07 (1) of the Part 138 MOS:

Broadly speaking, a search and rescue operation is an operation where the purpose is to find a person, provide for their initial medical needs, and deliver them to a place of safety as outlined above. In conducting a search and rescue operation an aircraft may be conducting one or more types of aerial work. For example, during the search the aircraft would be conducting a task specialist operation. If the flight dispensed stores after locating the person, such as dropping a life raft or supplies while airborne, it would also need to possess an authorisation to conduct a dispensing operation. If the person were to be recovered by winch, this flight would also be required to possess an authorisation to conduct an external load operation.

#### *Difference between 'search and rescue' and 'medical transport'*

In classifying a flight as either search and rescue or a medical transport operation, consideration needs to be given to the tasking authority and the primary purpose of tasking.

A medical transport operation is a defined term in the CASR Dictionary. If, however, a flight is commenced as a Part 138 operation (e.g. a search and rescue), it is accepted that, as part of a search and rescue function, the operator may end up conducting operations that are similar





All changes to an aerial work operator's operations must be made using the operator's change management process. One of the outputs of the change management process is a determination of whether a proposed change is significant for the purposes of Part 138, or whether it is not significant. Significant changes must be approved<sup>1</sup> by CASA before they are implemented by the operator. Other changes need not be pre-approved.

The definition of 'significant change' in regulation 138.012 consists of four paragraphs. Paragraph 138.012(a) provides a prescribed list of items that are always considered a significant change. For example, a change to the operator's key personnel should always be treated as a significant change (see further explanation of alternate key personnel below) because it is described in the list of items in paragraph 138.012(a). Similarly, a change to one of the three overarching kinds of aerial work operations that an operator is authorised to conduct under their AWC is a significant change.

Part of the definition of 'significant change' (paragraph 138.012(d)) considers change that requires approval by CASA under 'these Regulations'. The term 'these Regulations' is defined in the CASR Dictionary and includes the provisions in CAR. The scope of this term also includes approval requirements mentioned in exemptions and directions, that is, if a legal direction instrument or a condition on an exemption requires the person to gain an approval from CASA, then that approval is considered to be a significant change due to the wording of paragraph 138.012(d) of CASR and needs to be the subject of an application for a significant change using the [Aerial Work Operations form](#) available on CASA's website.

If the organisation has applied for an approval under another part of the Regulations, this is also considered a significant change. For example, an organisation may apply under regulation 91.045 and subparagraph 91.600(2)(d)(ii) for approval to carry cargo in a location that obstructs or restricts access to an emergency exit. This application would be understood as meeting the definition of paragraph 138.012(d) and considered a significant change.

In the circumstance where the application for an approval is solely for the purpose of reissue or replacement of an instrument previously issued by CASA, and the conditions or other substantive content of the instrument remain unchanged, this is not considered a significant change.

If an item does not fit the descriptors in either paras 138.012(a), (b) or (d), paragraph 138.012(c) requires the organisation to consider the safety impact of the proposed change. If, in reviewing the proposed change the operator determines that the change does not or is not likely to maintain or improve aviation safety, then the change must be considered a significant change.

If a proposed change does not meet any of the elements described above, it would not be considered a significant change.

Subparagraph 138.012(a)(ii) of CASR states, inter alia, that a change in relation to the operator's key personnel is a significant change. Regulation 138.062 specifies when an application must be submitted to CASA for different kinds of significant changes. Subregulation 138.062(2) outlines that an operator must apply to CASA for approval of a change that is the permanent appointment, or the acting appointment (for a period of greater than 35 days), as any of the operator's key personnel of a person previously authorised to

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<sup>1</sup> Refer to regulation 138.062.







operations manual affected by the 138.025 approval (i.e. the significant change), clearly identifying the change.













- supply documented changes to their operations manual to CASA as part of their change approval process
- act in accordance with their own change management process as defined in their operations manual and the requirements of Division 138.B.3.

### *Key personnel changes*

Some operators may have decided to initially obtain an aerial work certificate without having any standby or alternate key personnel that can perform the duties of a key person when they are absent from the position or cannot carry out the responsibilities. Standby or alternate key personnel are generally referred to in the Part 138 rules using language similar to 'a person previously authorised to carry out the responsibilities of a key position'. Such individuals are required to be listed in the operations manual<sup>2</sup>. See GM 138.075 for additional information on these persons.

If an operator that does not currently have any alternate key personnel decides, after they have been issued an aerial work certificate, that they want to have standby or alternate key personnel, then the insertion of these persons into the operator's operations manual, as required by subparagraph 138.155(1)(e)(iv) of CASR, would be a significant change (see subparagraph 138.012(a)(iii) of CASR) and therefore require the approval of CASA (see regulation 138.062). Similarly, changing the specific individual who is the acting key person would require changing the name of the person in the operator's operations manual and this would be a significant change.

An alternate key person acting in the role for which they are previously authorised to carry out the responsibilities of the position for the same operator in a circumstance mentioned in subparagraph 138.155(1)(e)(iv), provided it is for a period of 35 days or less, **is not considered to be a significant change** and does not require any further approval by CASA.

Many small operators do not have the numbers of personnel within their company to provide alternate key personnel from within their own personnel. Under s28 of the Act, key personnel are required to be 'in the organisation'. Alternate key personnel that are normally employed by a different operator can be nominated as alternate key personnel, provided that the operator nominating them as alternate key personnel outlines in their operations manual how the alternate key person will be capable of fulfilling their responsibilities as a key person on short notice, particularly when they are normally familiar with a different operator's procedures and documentation suite. When conducting alternate key personnel duties, the person will need to have a direct relationship with the operator (whether by contract or other arrangement). Critically, the person must have the **time, and the ability**, to discharge their key personnel duties completely and comprehensively. It is highly unlikely that this can be satisfied if a key person is trying to conduct key persons duties for multiple operators at the same time. Also see the guidance provided in GM 138.012, 138.070 and 138.075.

Subregulations 138.062(2) and (3) describe the only circumstances in which an operator may change the nominated individual in a key personnel position without first receiving approval of the significant change. The change must be notified to CASA within the period specified in the regulation.

<sup>2</sup> Refer to subparagraph 138.155(1)(e)(iv).



**GM 138.068 CASA directions relating to operations manual or key personnel**

Under the provisions of this regulation and if satisfied that it is necessary in the interests of aviation safety, CASA may direct an operator to:

- remove, include, or vary information, procedures or instructions in their operations manual
- remove a person from a key personnel position.

In all cases, the regulation requires such a direction to:

- be issued in writing
- state the timeframe within which it must be complied with.

**3.4 Division 138.B.4—Organisation and personnel***Operating across multiple Parts*

Part 138 prescribes matters only relevant to aerial work operations. If an organisation is additionally a Part 133, 135, 141 or 142 organisation, other key personnel may be required. Similarly, if the operator is a Part 145 approved maintenance organisation, other specified managers for maintenance activities are required.

Where a combination of Parts of CASR require the appointment of the same position, an operator should ensure the responsibilities and accountabilities documented in the exposition or operations manual address the requirements of all relevant Parts.

*Key personnel*

Division 138.B.4 sets out CASA's requirements for key personnel. The listing of key personnel in this subsection does not mean that every operator has to provide a different person for each named post. The section details the responsibilities and accountabilities of each key person post, not the individual post holder. This means that one person could carry out the responsibilities of two key personnel if circumstances exist in which this is appropriate and feasible. It is not the intent of the regulation to mandate any additional structures, resources or processes in excess of those needed to fulfil the requirement. In assessing an organisational structure, CASA needs to be satisfied that the proposed structure is appropriate for the activities conducted and that the operator can effectively manage the operations safely.

Separation of key personnel responsibilities to different individuals may be required if an operator's size and rate of effort exceeds the ability of a combined CEO/HOO to manage effectively, or if a CEO is not qualified to be the HOO. In large organisations, the scope and size may prohibit a single individual from carrying out all the duties that might be required to meet the responsibilities of their position. In this instance, systems and teams may be needed to carry out the duties, while the key person directs, monitors and bears the regulatory responsibility.





out, that systems are managed, and that the performance of tasks are monitored. It is normal and permissible for key personnel to assign others to carry out tasks or duties, provided the key person can monitor and oversee the performance of the duties.

If operators do not have the resources to ensure a key person, or an authorised alternate (see the subheading below on alternate key persons), is always present and on duty when operations are in progress, then the operator's operations manual should detail how the tasks and duties encompassed by each key persons' responsibilities are met during this period.

#### Example

Under paragraph 138.095(2)(d), the HOO is responsible for ensuring the proper allocation and deployment of the operator's aircraft, and the operator's personnel, for use in the operator's aerial work operations.

This responsibility could be met by the operator having a process to allocate an appropriate aircraft and FCM to a particular aerial work flight. In practice, this could be done by a person using a rostering system that uses a variety of inputs such as FCM status and flight profiles. After consideration of the relevant factors, the person and system could produce an aircraft and crew assignment that meets legislative and operator requirements and is considered 'proper'.

The HOO does not have to be the person carrying out the process or be present when the process occurs—the subregulation simply requires them to ensure it is done properly. Operators could design systems that function without the key person being in attendance and that still provide for effective oversight.

#### *One person conducting more than one key person's responsibilities*

The criteria regarding one individual sharing more than one key person's responsibilities can be found in regulation 138.050.

(if any) - see the later specific paragraphs in this GM entry on this topic. It is recommended that the operator maintain an auditable register, providing a chronological record of each occasion that the temporary/deputy key person holds responsibility and accountability for the position. The operator's procedures may also:

- detail who is responsible for notifying CASA
- describe a means for providing the notification.

#### *Alternate key person*

The regulations permit certain persons to act as an alternate in the role of a key person (these kinds of persons are colloquially referred to as *alternate key persons* or *standby key persons*). The decision to include alternate key persons in the operator's operations manual rests with the organisation. Refer to GM 138.062 in relation to these persons and whether a significant change approval is required.

Using alternate key personnel has the potential to be beneficial, as it can minimise the disruption to operations in several circumstances, such as:

- an unexpected illness of the primary person
- annual leave

- a change in the individual's circumstances leading to their inability to manage the duties and responsibilities of their position in the organisation
- sudden resignation / retirement.

Ideally, the operator would nominate a person who has the qualifications to hold the key person position, authorised by CASA to meet the circumstances of this regulation. The nomination of an alternate person follows the same process as the primary person. Likewise, any assessment of an alternate person will follow the process applicable to the primary person.

Any alternate key person must have received familiarisation training in relation to the substantive key person's responsibilities and accountabilities prior to carrying out the responsibilities of the position. The operator must have a means of demonstrating that this familiarisation training has been provided to alternate key persons.

Where an alternate person has been nominated, the operator's operations manual is to include the full name of each person authorised to act on behalf of each key person during any period of inability to carry out their responsibilities, and describe how the alternate key person process is managed.<sup>4</sup>

In developing the content of the operations manual, the following should be considered for inclusion:

- when the alternate person can act in place of the primary person
- the method by which all personnel are expediently notified of the change of the position holder, and the period for which the change is in effect
- detailing who is responsible for notifying CASA of a change to the key position holder, as per the regulatory requirements and the means of providing the notification
- an auditable register that provides a chronological record of each occasion that the alternate key person holds responsibility and accountability for the position
- the method of communication and handover processes between the primary and the alternate key person.

The process must ensure that the alternate person does not discharge the duties and responsibilities of a key person until they formally assume the role, at which point they must perform all of the associated duties and assume full responsibility for the position. The nomination of an alternate person is achieved by the same method and assessment process as the primary person.

In the interests of safety, and to be satisfied that a temporary key person is suitable to carry out the responsibilities of the key position, CASA may issue a direction for the person to undertake an assessment, as per the requirements of the key position<sup>5</sup>.

#### *Alternate key person not full time for an operator*

Many small operators do not have the numbers of personnel within their company to provide alternate key personnel from within their own personnel. Part 138 has some flexibility in this

<sup>4</sup> Refer to subparagraph 138.155(1)(e)(v).

<sup>5</sup> Refer to regulation 138.120.







- mixed type rated aircraft (e.g. Cessna 210, Aero Commander AC690)
- different kinds of aerial work operations.

In this case the operator may elect to create a position within the management structure to support the HOO, where the incumbent is required to be a role or type specialist for that function. Such a position must be detailed in the operations manual. The specialist manager would report to the HOO and assist with the discharge of their responsibilities. This does not remove the accountability or responsibility for the HOO to manage the specialised operations.

It is important to note that a kind of aerial work is defined as one of the three overarching aerial work purposes, namely external loads, dispensing, and task specialist operations. As such, the HOO is not required to be qualified to conduct all of the operator's aerial work operations. For example, the HOO may be qualified to conduct Class B external load operations, but not Class C external load operations.

In circumstances where an operator wishes to conduct a new 'kind of aerial work operation' for which the HOO has no qualification or experience the operator will need to provide training to the HOO. This may mean using an external training provider or utilising a suitably qualified person to conduct the training in accordance with the operator's internal training requirements, as specified in the operator's operations manual.

The regulation also permits CASA to require assessment of the HOO candidate. However, CASA must give written notice to the individual if this assessment is required.

Prior to conducting an assessment, CASA will conduct a desktop review of any nomination. In some cases, CASA will not require any further information as the nominee may be well known due to significant experience, or possibly having had a recent assessment conducted which addresses key criteria for a HOO.

For example, an individual may be performing as HOO for an aerial work operation and elects to transfer to another operator. In this case, CASA may consider a number of matters, such as, but not limited to:

- how recently the individual has been assessed
- the performance of the individual in any previous assessment
- similarities or differences between the previous organisation and the new organisation that the individual has been nominated for
- the individual's performance as HOO in previous positions.

Any assessment will seek to confirm that the nominee has a suitable understanding of the role and the complexities of aircraft/operations applicable to the nominated position.

Flight assessments may be conducted in an aircraft or a flight simulator, as specified in the notice of assessment.

When a candidate's nomination has been refused, the operator and the candidate will be advised of the reasons in writing.

*Foreign licensed HOO and foreign registered aircraft*

Paragraph 138.090(1)(b) requires the HOO to hold the pilot type rating or class rating (within the meaning of Part 61) for the aircraft that is used to conduct the greatest proportion of the operator's aerial work operations. CASR Part 138, different to Part 119, does not expressly require the HOO to hold an Australian flight crew licence<sup>8</sup>. The bracketed '(within the meaning of Part 61)' has the effect of expanding, rather than narrowing, the meaning of the words relating to pilot type or class ratings in paragraph 138.090(1)(b).

As a result, a HOO that holds foreign pilot type or class ratings equivalent to the pilot type or class ratings that would otherwise be required by or under Part 61, providing the other requirements in paragraph 138.090(1)(b) relating to significant proportion etc. are met. For a person who seeks to convert a foreign licence or rating to an Australian licence or rating, see regulation 61.275 of CASR. A HOO with only a foreign licence and ratings will need to be able to demonstrate sufficient safety and regulatory knowledge of the operator's Australian aerial work operation to enable the operator to conduct the aerial work operations safely and in accordance with its operations manual and Australian civil aviation legislation as required by paragraph 138.090(1)(e).

In the case of a HOO applicant that only holds a foreign licence and rating, HOO candidates and aerial work certificate applicants and holders are advised that CASA will, as a matter of policy, conduct an assessment of the HOO candidate in accordance with subregulations 138.090(4) and (5). The HOO applicant will need to demonstrate that they possess the required safety and regulatory knowledge.

Australian registered aircraft require the pilot to be authorised 'under Part 61'. Consequently, where an operator operates a mixed fleet of Australian and foreign registered aircraft, a HOO who only holds a foreign licence and rating, may not be able to satisfy the requirements of paragraph 138.090(1)(b) if the Australian registered aircraft are used by the operator to conduct the greatest proportion of the operator's aerial work operations.

*When not meeting the minimum experience requirements*

The regulation makes provision for an operator to seek an approval under regulation 138.025 to appoint a candidate who does not meet an element of the minimum experience requirements. Such an application should demonstrate how the variation would preserve a level of aviation safety that is at least acceptable. In accordance with the guidance in the flight operations regulations approvals AC 11-04, an acceptable level of safety is one that is equivalent to the standard of safety established if the regulations were met without needing the approval.

*HOO qualifications after appointment*

For a HOO to effectively fulfil the responsibilities and duties required by CASR, they would normally maintain the qualifications that they held when initially appointed as HOO. Should a

<sup>8</sup> Regulation 119.135 requires a Part 119 HOO to hold a commercial pilot licence or air transport pilot licence. Clause 36 of Part 2 of the CASR Dictionary defines a reference within the regulations to a particular kind of flight crew licence as meaning a flight crew licence of that kind that may be granted under Part 61 of CASR and which also includes a certificate of validation of an overseas flight crew licence that is equivalent to the mentioned kind of Part 61 licence.

HOO lose currency/recency, the organisation should evaluate whether effective supervision is maintained by the individual continuing in the role. While there is no regulatory requirement for the HOO to "fly the line", it is acknowledged that first-hand experience is maintained by those individuals who do so. For the non-flying HOO, organisations would be expected to demonstrate that they have sufficient senior individuals involved in the daily flying operations who are part of the organisational structure, who can provide supervision to junior members, and who also have the experience to identify items that need to be raised for attention at the HOO or CEO level.

#### *Remotely located HOO*

There are occasions in which an operator may nominate a HOO who will not be located at the operator's main base and intends to exercise the privileges of their HOO approval remotely. Experience has shown that, in the absence of onsite key personnel, the lack of direct guidance can result in non-compliance with statutory requirements.

The onsite presence of a HOO is important for an operator's day-to-day operations. The HOO can exert considerable influence on the safety of operations and the standard of operational matters and compliance. These objectives are difficult to achieve by a permanently remotely located HOO.

In any situation where the candidate has other commitments inside or outside aviation, the operator must consider whether the candidate has adequate time to discharge the duties and responsibilities of a HOO.

#### *Part-time HOO*

In some circumstances an organisation may seek to employ a person as HOO who also works in another flying operation, possibly as their HOO, or the person may work in a completely different industry. While there is no regulation that prevents this from occurring, organisations should be prepared to demonstrate how the resultant workload is being managed by the key person. Any such case would need to consider a number of factors including, but not limited to:

- the individual's total workload
- proposed number of hours worked per week (across all employment)
- method of ensuring suitable rest periods
- method of ensuring compliance with workplace and fatigue requirements
- method of confirming that the HOO is available when operations are being conducted and how they will supervise such operations.

If an organisation's HOO is engaged in employment duties for another organisation at certain times, then it should be considered that the key personnel position will be absent/vacant during these periods, and hence flying operations cannot be conducted. Organisations should also be aware that some HOO duties are required outside the hours of flying operations, i.e. consideration of other administrative duties is needed.





Operators are to apply for this approval by applying for a significant change via the [Aerial Work Operations form](#) available on CASA's website.

If the organisation is required to have a training and checking system under regulation 138.125, they will require a head of training and checking (HOTC).

The HOTC must hold an amount of experience commensurate to the size and complexity of the organisation. Operators should note that they will need to provide CASA with relevant supporting information to show that the HOTC candidate has sufficient safety and regulatory knowledge in accordance with paragraph 138.100(2)(e).

The HOTC is required to be qualified to fly each kind of aerial work operation that the operator conducts. However, the regulation does not require a HOTC to possess every Part 61 rating or endorsement relevant to the operations being conducted by the operator.

In larger organisations the HOTC is often located in a head office location, and as such may be physically removed from the day-to-day conduct of the operator's flight operations. In considering whether the HOTC can adequately fulfil their responsibilities, one factor to consider is whether the HOTC is qualified to conduct all operations conducted by the organisation, or whether appropriately qualified additional staff are necessary to support the HOTC with subject matter expertise related to different aircraft or different operations. In all cases, the HOTC is required to possess a minimum amount of training experience in accordance with this regulation, in addition to having sufficient aviation experience to supervise and manage the staff and functions of the organisation.

It is important to note that a kind of aerial work is defined as one of the three overarching aerial work purposes, namely: external load operations, dispensing operations, and task specialist operations. While the HOTC must be qualified to fly each *kind* of aerial work operation that the operator conducts, they are not required to be qualified to conduct all the operator's aerial work operations. For example, the HOTC may be qualified to conduct Class B external load operations, but not Class C external load operations. Such circumstances would require the appointment of a specialist for the conduct of activities that the HOTC is not qualified for/experienced in.

Under regulation 138.120 CASA can require, by written notice, additional qualifications and experience to those required by this regulation.

#### *Foreign licensed HOTC and foreign registered aircraft*

Paragraph 138.100(2)(b) requires the HOTC to hold the pilot type rating or class rating (within the meaning of Part 61) for the aircraft that is used to conduct the greatest proportion of the operator's aerial work operations. CASR Part 138, different to Part 119, does not expressly require the HOTC to hold an Australian flight crew licence<sup>9</sup>. The bracketed '(within the meaning of Part 61)' has the effect of expanding, rather than narrowing, the meaning of the words relating to pilot type or class ratings in paragraph 138.100(2)(b).

<sup>9</sup> Regulation 119.145 requires a Part 119 HOTC to hold a commercial pilot licence or air transport pilot licence. Clause 36 of Part 2 of the CASR Dictionary defines a reference within the regulations to a particular kind of flight crew licence as meaning a flight crew licence of that kind that may be granted under Part 61 of CASR and which also includes a certificate of validation of an overseas flight crew licence that is equivalent to the mentioned kind of Part 61 licence.

As a result, a HOTC that holds foreign pilot type or class ratings equivalent to the pilot type or class ratings that would otherwise be required by or under Part 61, providing the other requirements in paragraph 138.100(2)(b) relating to significant proportion etc. are met. For a person who seeks to convert a foreign licence or rating to an Australian licence or rating, see regulation 61.275 of CASR. A HOTC with only a foreign licence and ratings will need to be able to demonstrate sufficient safety and regulatory knowledge of the operator's Australian aerial work operation to enable the operator to conduct the aerial work operations safely and in accordance with its operations manual and Australian civil aviation legislation as required by paragraph 138.100(2)(e).

In the case of a HOTC applicant that only holds a foreign licence and rating, HOTC candidates and aerial work certificate applicants and holders are advised that CASA will, as a matter of policy, conduct an assessment of the HOTC candidate in accordance with subregulations 138.100(5) and (6). The HOO applicant will need to demonstrate that they possess the required safety and regulatory knowledge.

Australian registered aircraft require the pilot to be authorised 'under Part 61'. Consequently, where an operator operates a mixed fleet of Australian and foreign registered aircraft, a HOTC who only holds a foreign licence and rating may not be able to satisfy the requirements of paragraph 138.100(2)(b) if the Australian registered aircraft are used by the operator to conduct the greatest proportion of the operator's aerial work operations.

#### *Assessment*

The regulation permits CASA to direct a HOTC, or proposed HOTC, to undertake an assessment of their suitability to be a HOTC. CASA must give written notice to the individual if this assessment is required to be undertaken.

Prior to deciding whether an assessment is required to be undertaken, CASA will conduct a desktop review of any nomination. In considering whether CASA will require an assessment to be undertaken, CASA may consider a number of matters, such as, but not limited to:

- whether the individual has recently been assessed, and how recently such an assessment occurred
- the performance of the individual in any previous assessment
- if the individual has previously been a HOTC for a different organisation—the similarities or differences between the previous organisation and the new organisation that the candidate is nominated for
- the performance of the individual as HOTC in previous positions (if any).

Any assessment will seek to confirm that the nominee has a suitable understanding of the role, including the operator-specific complexities of aircraft/operations.

Flight assessments may be conducted in an aircraft or flight simulator, as specified in the notice of assessment.

When a candidate's nomination has been refused, the operator and the candidate will be advised of the reasons in writing.





be involved in much of the detail of the regulation 138.105 responsibilities. However, in a large operation with a larger number of senior staff, the HOTC may be supported by senior or other staff in discharging their responsibilities.

For operators that are not continuously carrying out training and checking events, there may be no need for the HOTC to be on duty or available when training and checking is not taking place. However, the nominated HOTC would still need to fulfil the responsibilities outlined under the regulations, whether they were present or not. The operator has the responsibility for proposing any such arrangement to CASA in the operations manual.

Where an operator establishes multiple regularly used training locations, in order to meet the requirements of regulation 138.155, the operations manual should outline how day-to-day issues are managed across the various locations. The HOTC is responsible for all training operations, regardless of location, and to ensure that the HOTC's responsibilities are fulfilled, it may be necessary for the operator to appoint a person who conducts certain duties at these locations in support of the HOTC (sometimes called a senior check pilot or similar terms). In this case, it is recommended that the operations manual contain:

- a position description outlining the duties, qualifications and training / checking requirements of the supporting position
- an organisational chart showing reporting lines
- a method of regular communication between senior training and/or check pilots and the HOTC
- a description of how the HOTC will oversee the conduct of assigned duties by the supporting person, so that the HOTC remains assured that they have met their responsibilities.

For example, the HOTC could rely on compliance reports from a senior check pilot in giving their own compliance report to the HOO, but this does not remove the ultimate accountability and responsibility imposed on the HOTC by regulation 138.105.

*Paragraph 138.105(3)(a) - ensure that the operator is compliant with the legislative requirements in respect of qualifications, training and checking of the operator's flight crew*

A means must be provided for the HOTC to carry out the functions required to fulfil this responsibility. These may include, but are not limited to:

- receiving information and data from the SM and the SMS – for example, incident reporting and accident data and trending information (note: not all aerial work organisations are required to have an SMS)
- collecting and reviewing information obtained during internal audits of documentation such as training records
- ensuring that continual supervision of training and checking staff is maintained to monitor the standard of instruction provided
- receiving regular feedback and reports in relation to compliance matters from other staff assigned responsibility for particular flight training and checking activities
- maintaining communications with personnel located in different locations, and carrying out inspections to ensure standardisation of instruction
- receiving and reviewing feedback from checking staff regarding checking events

- reporting to the CEO and HOO in relation to matters such as those listed above.

*Paragraph 138.105(3)(b) - ensure that the HOO is made aware of the compliance state of all crew qualifications, training and checking activities*

To ensure the HOO receives reports on compliance requirements for personnel qualifications, currency and training, a means must be provided for the HOTC to carry out the functions required to fulfil this responsibility. These may include, but are not limited to:

- recommending upgrade training or recruitment action (when necessary) to meet training and checking qualification requirements for the conduct of a particular activity
- providing evidence of the content, completion and results of the training and checks required by the internal training and checking system and manual.

*Paragraph 138.105(3)(c) - ensure that the training and checking of flight crew conducted by or for the operator is conducted in accordance with the operator's training and checking manual*

To ensure training and checking activities are conducted in accordance with the operator's training and checking manual, a means must be provided for the HOTC to carry out the functions required to fulfil this responsibility. These may include, but are not limited to:

- ensuring training and checking personnel receive or have access to the applicable manual sections, and are familiar with their contents prior to conducting activities
- ensuring personnel are competent in the use of any software program that may be utilised as a tool for the training system
- providing training and guidance to personnel in the use of competency-based syllabuses, and providing supervision to confirm training is conducted in accordance with the syllabuses and standardised procedures of the organisation
- analysing data relating to matters such as repeated training events, time taken to achieve new qualifications / upgrades, and actual progress of trainees against the course schedule.

The HOTC must have the ability to make changes to the training system processes, where required, and initiate consequential amendments to the applicable manual parts.

*Paragraph 138.105(3)(d) - using a Part 142 operator to conduct training or checking activities*

An operator can elect to use a contracted Part 142 operator to conduct training or checking activities. In this case, the HOTC remains responsible for:

- ensuring that each individual engaged by a Part 142 operator conducting training or checking is authorised under Part 61 for those applicable activities
- informing the Part 142 operator, in writing, of any change in or to the operator's training and checking manual relating to the training and checking activities.

To ensure personnel conducting contracted training or contracted checking are authorised under Part 61, the operator's HOTC (and/or allocated staff) will require access to the contracted operator's manual and a means to view the tracking functions of















**GM 138.155 Content of operations manual**

An operations manual is a document, that may consist of multiple volumes, which describes how an organisation will conduct its operations safely. It sets out (for CASA, the operator and its personnel involved in the operation) how to comply with all applicable legislative requirements and manage the safety of the operation, as well as details of each plan, process, procedure, program and system implemented.

If structured as a set of documents, the operations manual might include a 'principal/primary document' that contains all the information applicable to common operator activities. Separate volumes can be established for specific aspects of certain activities, and the associated systems and procedures applicable to those activities. These separate volumes form part of the operations manual.

The operations manual comprises the principal document and all other operator-nominated volumes or manuals. Where the operations manual is comprised of other volumes/documents, the principal document must reference the other volumes and state that they are part of the operations manual.

In developing the operations manual content, the operator should refer specifically to the list of items in the regulation to ensure completeness.

For example, paragraph 138.155(1)(e) stipulates further requirements for key personnel in addition to those in Division 138.B.4.

Note, for subparagraph 138.155(1)(e)(v) operators need to consider the particular key personnel situation in regard to their operational circumstances. This includes circumstances where there is a nominated deputy and circumstances where there is no nominated deputy to take over the key personnel role and how operations will be impacted by the absence or unavailability of the key person in question.

In this second situation, circumstances such as how operations currently underway will be safely concluded and how future operations will be safely managed, where the key personnel position responsibilities are relevant to that operation, need to be considered.

Operators should note the safety implications of this situation are exacerbated when a single individual carries out more than one key personnel role for the operator. In such situations where that individual is no longer able to carry out their responsibilities, operations are highly likely to need to be suspended until the key personnel roles can be filled by an appropriately experienced and trained nominated individual or individuals.

Refer also to the GM for regulation 138.075 for more information on this topic.

For the requirements under paragraph 138.155(1)(m) relating to significant changes, operators should also refer to regulation 138.062.

Further guidance on the content of an aerial work operations manual is contained in [AC 1-02 - Guide to the development of expositions and operations manuals](#).

**AMC 138.157 Compliance with operations manual by operator**

Reserved









Under *CASA EX86/21 – Part 138 and Part 91 of CASR – Supplementary Exemptions and Directions Instrument 2021*, an operator is directed to obtain an approval from CASA to operate a foreign aircraft. The CASA approval requirement means that commencing, or ceasing, the use of a foreign aircraft will be taken to be a significant change, and therefore will be governed by the Part 138 operations manual change rules.

The Australian civil aviation legislation relating to airworthiness (Part 42, CAR Parts 4/4A/4B/4C/4D, and subordinate legal instruments) applies to Australian aircraft and does not apply to foreign registered aircraft. Foreign registered aeroplanes or rotorcraft operated by an aerial work operator would be regulated for their operation by CASA, but would be regulated for their maintenance by the national aviation authority (NAA) of the State of the aircraft's registration. This circumstance, whereby oversight is split between CASA and the other NAA, results in neither party having a holistic and completely transparent view of the aircraft, its maintenance and its operation. When this period of split responsibility is extended, it can have an adverse effect on the safety of air navigation.

Similarly, leases and other commercial agreements in relation to foreign aircraft operations have the potential to lead to the situation where the country of aircraft registration has limited ability to conduct adequate control and supervision of the aircraft, its operation and its maintenance.

Unlike the previous regulatory regime whereby commercial aerial work operations required an AOC, and thus when using a foreign registered aircraft also required CASA to establish an agreement under section 28A of the Act with the NAA of the State of registry of the aircraft, there is no mandatory provision in Part 138 requiring the establishment of such an agreement between CASA and the foreign NAA.

This regulation limits the use of any singular foreign registered aircraft, in any aerial work operation conducted by an aerial work operator (which means an aerial work certificate holder), to a total of 90 consecutive days in a 12-month period beginning on the day the foreign registered aircraft first becomes available (i.e., begins to be in "use") to conduct aerial work operations for the operator in Australian territory.

The underlying intent of this regulation is to provide for the short-term use (i.e., up to the standard 90-day limit stated in the regulation) of a foreign registered aeroplane or rotorcraft during circumstances such as the operator's normal Australian registered aircraft undergoing repair or maintenance, or where the operator needs to add capacity for peak periods, or where the operator is using an aircraft in Australia for a specific operating season before it returns overseas, or to allow an aircraft to be trialled in the operation. It is not intended that an aerial work operator use a foreign registered aircraft for a lengthy period of time under foreign registration without an agreement being in place with the State of registry for the oversight of the aircraft. When foreign registered aircraft are only used up to the consecutive 90-day period in accordance with this regulation, then such an agreement is not required due to the short-term nature of the aircraft use.

Options for operators relating to the use of foreign registered aircraft beyond the 90-day period include:

- placing the foreign registered aeroplane or rotorcraft on the Australian Part 47 register, thus placing the airworthiness of the aircraft under solely Australian oversight

- or
- applying for an approval under regulation 138.025 for the purposes of regulation 138.200 (this approval power is subject to regulation 11.055)
- or
- CASA entering into an article 83 bis agreement with the State of registry, so that the aircraft is treated as if it were an Australian registered aircraft.

If an operator applies for an approval for a period of time longer than 90 days, then CASA would be unlikely to issue the approval without first establishing an agreement with identical effect to that required under section 28A of the Act. To establish this agreement, the operator making application for the approval is likely to be directed by CASA (under regulation 11.040) to provide the relevant information that could support the establishment of such an agreement (see section 28A of the Act for the kinds of information required).

Any application for an approval envisaging an enduring need for a number of days greater than 90 is recommended to provide reasons why the aircraft cannot be placed on the Australian register. In particular, information outlining the number of days an aircraft might be used within Australia and within each other country where operations are intended to be conducted would be of benefit to CASA in gaining an understanding of the reasons behind not placing the aircraft on the Australian register. This information will assist CASA in determining under paragraph 11.055(1A)(e) whether granting the approval would be likely, or not be likely, to have an adverse effect on the safety of air navigation.

There is no specific limit on the number of days that could be approved, noting that no limit beyond 12-months would be practically necessary due to the wording of the regulation.

To illustrate application of the 90 consecutive days, consider the following example:

*Sample Aviation applies for approval of a significant change seeking the addition of a foreign registered aircraft to their existing aerial work certificate.*

*The aircraft is subsequently ferried to Australia and then undergoes maintenance work to refit its role equipment following the transit.*

*On 1 March 2023 the aircraft is available to conduct operations and a crew is assigned for duty.*

*Accordingly, 1 March 2023 is considered the day that the aircraft is first available and the period of 90 consecutive days will be reached on 29 May 2023.*

*It does not matter whether Sample Aviation conducts only a single day of flight operations or 90 days of flight operations, the period of 90 consecutive days will be reached on 29 May 2023 as this is 90 days from the day the aircraft was first available.*

*After 29 May 2023, if Sample Aviation wishes to conduct any further operations with this foreign registered aircraft prior to 1 March 2024, they must obtain an approval under regulation 138.025 for the operation.*













#### **4.5 Division 138.C.5—Search and rescue services and emergency and survival equipment**

There is a direction in force in relation to aerial work certificate holders and survival equipment procedures. It is recommended that operators review section 20 of CASA EX86/21.

Division reserved

#### **4.6 Division 138.C.6—Miscellaneous requirements**

Division reserved







may also be required. Guidance on this topic can be found in [AC 138-05 Aerial Work Risk Management](#).

The circumstances mentioned in these Part 91 subregulations, which are repeated by necessity in the Part 138 MOS, describe situations when it is permissible, under Part 91, to operate below the relevant minimum height requirement. For example, if the aircraft is taking off or landing at an aerodrome. Outside of these circumstances, Chapter 9 of the Part MOS describes the risk management requirements and safety conditions for situations when an aerial work operation is required to operate at less than a minimum height limitation of Part 91.

It should be noted that the alleviations to the minimum height rules are only applicable during the conduct of the aerial work operation. This means that, while positioning to conduct the aerial work operation, the flight is required to comply with the minimum height requirements in Part 91.

The situations and activities with alleviations in Chapter 9 of the Part 138 MOS are:

- close proximity to an object in an area that is not a populous area or a public gathering
- rotorcraft — IFR flight and VFR flight at night, below minimum height
- aircraft IFR flight below minimum height over the sea in IMC or at night
- rotorcraft IFR flight that is a SAR operation involving an auto-hover using transition mode capability over the sea
- aircraft flight over populous areas and public gatherings.

Many of these situations are highly specialised aerial work operations, which will require considerable additional risk mitigation, operator procedural control, crew training and specialised equipment fit to be carried out by an operator.

However, the ability to operate in close proximity to an object in an area that is not a populous area, or a public gathering, is a situation very commonly needed for the conduct of many aerial work activities.

#### *Section 9.03 of the Part 138 MOS*

Section 9.03 of the Part 138 MOS outlines the requirements which must be complied with to disapply the requirements of regulation 91.267 which would otherwise prevent the close proximity operations mentioned above.

**Note:** The reference is specific to operating in close proximity to an object and not to low flying, as paragraph 91.267(3)(h) does not limit a pilot with a Part 61 of CASR low-level rating to a minimum height, provided they do not operate in close proximity to objects and persons etc.

In this regard, regulation 138.500 of CASR requires the pilot in command of an Australian aircraft conducting aerial work operations to be authorised under Part 61 to carry out the duties in relation to the flight, so a low-level rating will be required for these operations. If the aircraft is foreign registered, authorised by the aircrafts state of the registry to conduct the duties assigned by the operator.









There are a number of specific classes of aerial work passenger in section 2.02 of the Part 138 MOS. There are 2 broad classes listed in subsection 2.02(1) and 4 specific kinds of persons listed in subsection 2.02(2). The list of specific kinds of persons was included in the MOS in response to industry feedback during Part 138 consultation activities.

For the 'other persons' class in paragraph 2.02(1)(a), the key criterion is that the person must be 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. Examples of an aerial work passenger would include:

- a person exiting or entering a helicopter whilst in the hover for the purpose of an external load operation that is a Class D external load hover exit/entry (see section 15.06 of the Part 138 MOS)
- a journalist conducting a live broadcast
- a rigger being positioned into a remote site in preparation for an external load operation
- a ringer to identify hazards in the area of a mustering operation, and to open and close gates as part of the mustering operation.

Since an aerial work passenger is not part of the crew, they do not require any training to be inducted into the organisation. This is what distinguishes an aerial work passenger from a task specialist. However, an aerial work passenger must be given a passenger briefing prior to the flight that complies with section 20.06 of the Part 91 MOS and there are other requirements to provide appropriate protection to these passengers.

As an aerial work passenger is not part of the crew, additional risk mitigation in the form of aircraft performance is required in certain circumstances. The operator's operations manual will also need to outline when they will carry an aerial work passenger and how that passenger is essential to the aerial work operation. Consequently, the carriage of aerial work passengers is only permissible if the operator holds an AWC.

Section 2.02 of the Part 138 MOS defines the classes of aerial work passenger. Chapter 11 of the Part 138 MOS provides conditions that must be complied with when conducting aerial work operations involving the carriage of such passengers. There is additional guidance in AC 138-01, including sample operations manual clauses in Appendix A to the AC that could be adapted by operators for operations not encompassed in the scope of the sample clauses.

There are also some special rules in sections 9.03 to 9.23 of the Part 138 MOS that apply in certain higher risk situations. Operators should review these sections to check whether those situations apply to their operations – if they do, operators will need procedures to ensure compliance with the applicable rules.

### **AMC 138.320 Procedures for the carriage of restricted persons**

Reserved



**GM 138.345 Survival equipment procedures**

The regulation applies to a flight in a remote area or when a life raft is required to be carried. The Part 91 MOS provides the definition of a 'remote area'. The regulation requires the operations manual to include procedures for determining the survival equipment and pyrotechnic signalling devices required for the flight.

The onus is on the operator to assess the environments, locations, and circumstances in which they are operating and to decide what survival equipment is appropriate to be carried. The operations manual procedures should outline the factors and risks the operator will take into account when determining the specific items of survival and signalling equipment required to be carried on different kinds of flights or to different locations, or any other permutation assessed as relevant to the individual operator.

The relevant outcome-based provisions are in section 22.08 of the Part 138 MOS.

Appendix 1 of Annex 2 to the Chicago Convention, Rules of the Air, also contains some valuable information regarding pyrotechnic signalling devices. Certain signals have an internationally standardised meaning; for example the following signals, when used either together or separately, mean that grave and imminent danger threatens, and immediate assistance is requested:

- rockets or shells throwing red lights, fired one at a time at short intervals
- a parachute flare showing a red light.

**AMC 138.350 NVIS flights**

Reserved

**GM 138.350 NVIS flights**

There is a direction in force in relation to aerial work certificate holders and the approval required before conducting an NVIS operation for the first time in an aerial work operation. It is recommended that operators review section 23 of CASA EX86/21. The approval mentioned in this section of the exemption is taken to be a significant change due to it activating paragraph 138.012(d) of CASR. Operators are to apply for this approval by applying for a significant change via the [Aerial Work Operations form](#) available on CASA's website.

The legal interrelationship between CASR Parts 91, 133 and 138 results in a significant amount of duplicated NVIS content across the Part 91, 133 and 138 MOS's. This duplication requires a solid understanding of when the rules contained in a particular MOS apply to a particular kind of flight that where NVIS is used. [Multi-Part AC 91-13, 133-09 and 138-06](#) contains guidance regarding the use of NVIS and section 2.3 of the AC is a detailed description of the application of the rules within the 3 MOS's.

The MOS content for this regulation is contained in Chapter 12 of the Part 138 MOS.

This regulation requires the operations manual to include procedures relating to the use of an NVIS for a flight under the IFR, or VFR at night, in accordance with the requirements prescribed by the Part 138 MOS.









solar flare activity and its effect on communications for each flight that is dispatched for operations into these areas.

- Minimum Equipment List (MEL) considerations – The MEL may need amendment to cater for polar operations. Specific consideration is applicable to:
  - fuel quantity indicating system, including the fuel tank temperature indicating system
  - engines
  - automation systems (if fitted)
  - communication systems relied on by the flight crewmember to satisfy the requirement for communication capability
  - an expanded medical/survival kit.
- Training for flight crewmembers and operational support staff roles applicable to all parts of the polar operation.

The regulation requires the operations manual to detail processes and procedures for managing crew and passenger exposure to cosmic radiation during solar flare activity. In complying with the regulation, the operator could:

- specify a cosmic radiation exposure limit
- maintain records of the total cosmic radiation dose received by any crew who are conducting longer term operations in the polar region.

When considering cosmic radiation in the aviation environment, the basic principle is that every reasonable effort should be made to minimise exposure to cosmic radiation, staying as far below the recommend dose limits as is practical and consistent with the activity.

In aviation, radiation from natural sources is considered occupational exposure because of the high levels of galactic cosmic radiation at commercial cruise altitudes. In its 2000 report, the United Nations Scientific Committee on the Effects of Atomic Radiation (UNSCEAR) ranked aircrews as the fourth most exposed group of employees, with an average annual effective dose of three millisieverts (mSv).

Less radiation is received in lower-latitude flight because of the greater amount of radiation shielding provided by the Earth's magnetic field. This shielding is greatest near the equator and gradually decreases to zero as one goes north or south. Galactic cosmic radiation levels over the polar regions are about twice those over the geomagnetic equator at the same altitudes. Because solar particle peak energies are much lower than galactic particle peak energies, solar cosmic radiation dose rates are negligible near the geomagnetic equator. A map of high-latitude areas of concern is available on the [FAA website](#).

The solar radiation alert system developed by the FAA's Civil Aerospace Medical Institute (CAMI), with data provided by the Space Weather Prediction Center of the National Oceanic and Atmospheric Administration (NOAA), alerts users of the beginning of a disturbance on the sun that can lead to high-dose rates of ionizing radiation in the earth's atmosphere. Solar radiation alerts are sent worldwide to subscribers to the NOAA Weather Wire Service (NWS). A message is sent at the beginning and end of an alert, along with status updates during the alert period. A test message is sent daily if no alert is ongoing. Responding to an alert by flying at a lower altitude can significantly reduce radiation exposure in high-latitude

areas of concern. The latest space-weather-related NWS messages are found on the [Space Weather Prediction Center](#) website.

The Australian Bureau of Meteorology also provides information on Space Weather advisories, and this can be found on the [Space Weather Advisories \(bom.gov.au\)](#) website.

### *Managing exposure*

The internationally accepted recommendation is that the occupational exposure limit for ionizing radiation is a five-year average effective dose of 20 mSv per year, with no more than 50 mSv in a single year. Radiation exposure as part of a medical or dental procedure is not subject to recommended limits. It is important to note that these limits are not thresholds beyond which the dose is intolerable, but instead are upper limits of acceptability based on the current risk coefficients and the desire to limit doses such that the health risks associated with exposure do not exceed those of what is normally considered a safe industry.

A number of web-based calculators are available for the calculation of radiation exposure.

For analysis purposes, the FAA provides applications CARI-6 and CARI-6M, which can be used to estimate the effective dose of galactic cosmic radiation.

No current programs and/or websites/applications are currently available for use in estimating the effective dose received from a solar particle event. The dose of ionizing radiation that an individual might receive during a solar particle event cannot be estimated in advance. Research is ongoing on how best to estimate flight doses on the basis of satellite and ground-level measurements made during an event.

- CARI-6 – This web application calculates the effective dose of galactic cosmic radiation received by an individual (adult) on an aircraft flying a great-circle route between any two airports in the world. The web application takes into account changes in altitude and geographic location during the course of a flight, as derived from the flight profile entered by the user. Based on the date of the flight, appropriate databases are used to account for effects of changes in the Earth's magnetic field and solar activity on galactic radiation levels. The web application also calculates the effective dose rate from galactic cosmic radiation at any location in the atmosphere at altitudes up to 60,000 feet. CARI-6 can be found on the [FAA website](#).
- CARI-6M – This web application does not require a great-circle route between origin and destination airports; it allows the user to specify the flight path by entering the altitude and geographic coordinates of waypoints. CARI-6M can be found on the [FAA website](#).



- the training requirements and competency checking procedures for relevant FCMs
- instructions for ground personnel (if any) involved in the operation
- a description of the operational routes permitted for operations, including minimum heights and distances from persons, populous areas, public gatherings, buildings and other structures, and vessels
- a description of any operational restrictions (if any) with which FCMs must comply during the operation
- the operator's risk assessment procedures.

#### *Carrying a load in the form of a person*

A Class D external load, where a human is carried external to the protection offered by the airframe, is considered to be a high-risk aerial work task and, as such, any operator conducting Class D external load operations will require comprehensive operational, risk management and training procedures for the specific tasks that they conduct.

**Note:** Regulation 138.500 requires the pilot in command to have specific qualifications and experience, as outlined in section 23.08 of the Part 138 MOS.

Adding a new kind of Class D external load operation constitutes a mandatory significant change to the operator's operation in accordance with subparagraph 138.012(a)(vii) of CASR.

Some examples of different 'adding a Class D external load operation' are:

##### Example 1

An operator applies for an aerial work certificate and includes procedures for conducting Class A external load operations. When the aerial work certificate is granted and includes that external load operations can be conducted, this is limited to Class A external load operations.

The operator later desires to add Class B external load operations. Starting to conduct Class A, B, C or E external load operations are not listed as a mandatory significant change under CASR 138.012. Assuming the other elements of the significant change definition are not triggered, adding the Class B external load operation is not a significant change.

The operator adds the Class B external load procedures (and training/checking as required) to their operations manual and notifies CASA of the non-significant change in accordance with their change management procedures.

##### Example 2

An operator applies for an aerial work certificate and includes procedures for conducting Class A external load operations. When the aerial work certificate is granted and includes that external load operations can be conducted, this is limited to Class A external load operations.

The operator later desires to add Class D belly hook external load operations. Starting to conduct any kind of Class D external load operation is as a mandatory significant change under CASR 138.012.

The operator applies to CASA for the significant change. Assuming it is approved (noting this is not the same as being granted an approval that is a legal instrument), the operator can commence doing that kind of Class D external load

(belly hook) but cannot do other kinds of Class D external load (winch, rappelling, hover exit / hover entry) without further significant change applications.

### Example 3

An operator holds an aerial work certificate authorising external load operations and has procedures for conducting Class D external load (belly hook) operations.

The operator later desires to add Class D (hover entry / hover exit) external load operations. Starting to conduct a new kind of Class D external load operation is a mandatory significant change under CASR 138.012.

The operator applies to CASA for the significant change. Assuming it is approved (noting this is not the same as being granted an approval that is a legal instrument), the operator can commence doing that new kind of Class D external load (hover entry / hover exit) in addition to their existing Class D (belly hook) external load operations. They cannot do the other kinds of Class D external load (winch, rappelling) without further significant change applications.

### *Classes of person who may be picked up or set down*

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 relevant section of the MOS:

- air crew members
- task specialists
- aerial work passengers.

However, it should be noted, except as prescribed, aerial work passengers cannot be a class D external load in all circumstances, for example winching operations in single engine or low performance multi-engine rotorcraft.

### *Winching operations*

For class D external load winching operations, the following considerations apply:

- the operator's operational risk assessment and mitigation process must indicate that the operation meets at least an acceptable level of safety, this will be verified by the operator's chapter 13 risk assessment procedures
- unless the operation is an ESO, if aerial work passengers are to be winched, the rotorcraft must be capable of hovering out of ground effect with one engine inoperative during the winching operation
- for a day VFR operation that is not an ESO, the rotorcraft need not be capable of hovering out of ground effect with one engine inoperative, provided:
  - the requirements of paragraphs 9.05 (b), (c), (d) and (e) of the MOS are met
  - the rotorcraft has a mass that does not exceed 90% of the MTOW HOGG permitted by the AFM for the most limiting mass of the operation
  - unless subsection (2A) applies the operation is not over water
  - **only essential crew members** including task specialists are carried or to be winched



- for an operation which is an ESO, or training for an ESO, additional elevations and requirements are prescribed in paragraphs 15.06(2)(d) and (e) to ensure the flexibility and the safety of winching operations in these circumstances
- effective radio or visual communication processes must be in place for the winching operation.

Operators conducting winching operations should ensure these requirements as applicable to their operations are covered procedurally within their operations manuals.

#### *Belly hook or platform*

Division 1 of Chapter 15 of the Part 138 MOS covers carrying a person as an external load operation. Subsections 15.06(3) and (4) cover operations as a sling load or carrying a person on a platform attached to the aircraft (such as the platforms used to conduct power line maintenance from a rotorcraft). Subparagraph 15.06(3)(e)(iii) outlines that, except for water rescue operations, only air crew and task specialists (not aerial work passengers) can be carried on a belly hook (sling) or platform. This effectively limits platform operations to the carriage of persons who are crew members. In water rescue operations, air crew members, task specialists and aerial work passengers (in the form of the person being rescued) may be carried via the belly hook. Refer to section 1.04 of the Part 138 MOS for the definition of *water rescue operation*.

All crew must have an effective means of communication. Although visual communication is acceptable for the purpose of the regulation, for these kinds of operations it is generally expected that there would be a radiocommunications system. If this were inoperative, the operation would not commence or would cease if already in progress. Hand signals would normally only be used if the radiocommunication system fails, and these emergency hand signals should be confirmed with the crew prior to commencing operations.

While there are no legislative requirements regarding pilot minimums or training for Class D external load platform operations, this is an activity with substantial risk, particularly for the linesman on the platform, and requires a high level of pilot competence. Operators should consider their own operational environment in setting minimums for this activity in their company.

#### *Rappelling*

Rappelling is a highly specialised task and, as such, Subsection 15.06 (6) of the Part 138 MOS requires that it only be conducted by ESO personnel in an ESO, or training for an ESO.

An operator must have detailed procedures in their operations manual for such operations and associated training, including specific risk assessment and management procedures. It is also expected that the HOO (or another nominated senior pilot) will have extensive experience in conducting rappelling operations, as well as the ability to impart this knowledge to other pilots and the rappelling crew. Operators should also have a senior air crew member experienced in rappelling operations.

#### *Hover exit / hover entry*

**Note:** In the paragraph below hover exit includes both emplaning and deplaning in the hover.

Operators will need procedures for the task, training and risk assessments in their approved operations manual. The Part 138 MOS also requires the air crew member, task specialist or aerial work passenger to have received hover exit training in accordance with the operator's operations manual.

Operations involving hover exit onto or off of a raised platform, such as a powerline transmission tower, are more specialised. As such, they require further specific procedures, training, and risk assessment. As these operations also require specialised safety harnesses with a means of safely attaching to the tower before releasing from the rotorcraft, with quick releases and break-away connectors, the procedures for use and the standards for these will also need to be included in the operator's operations manual.

*Can single-engine rotorcraft be used during external load operations?*

Single-engine rotorcraft can be used provided that the single-engine rotorcraft meets certain technical and operational requirements. The operator needs to carefully read the rules contained in Division 1 of Chapter 15 of the Part 138 MOS, including where the rules in that Division of the MOS require compliance with many elements of the rules in section 9.05 of the Part 138 MOS.

For example, if a person was to be carried on a belly hook in a single-engine rotorcraft, the conditions for this to occur include:

- turbine engine
- control of the aircraft to be able to be maintained in the event of a failure of the hydraulic system
- redundant means of controlling fuel flow to the engine
- a usage monitoring system
- a hook certified for the carriage of humans.

Examples of how these requirements may be applied in practice include:

- a Bell Longranger rotorcraft fitted with an aftermarket usage monitoring system would meet these requirements.
- similarly, a Robinson R66 rotorcraft would also meet these requirements.

Operators should familiarise themselves with the 'Note' following paragraph 9.05(e) of the Part 138 MOS which was included in the MOS to remove any doubt regarding the suitability of the R66.

However, some single-engine/single-hydraulic rotorcraft would not meet the hydraulic failure related requirement (which is specified in paragraph 9.05(d) of the Part 138 MOS) due to the prohibition on hovering these aircraft hydraulics off in the aircraft flight manual. These rotorcraft would be required to be fitted with dual hydraulics to meet this capability requirement.





- that live ammunition (when not loaded in the firearm) must be stored in a container, or containers, that:
    - are capable of withstanding the normal conditions of air transport; and
    - are appropriately identified as dangerous goods, meaning the containers or packaging is marked with the UN number and/or proper shipping name and labelled with the applicable hazard division label diamond (e.g. Division 1.4S diamond); and
    - during the aerial work operation, any spare ammunition is able to be secured, including during take-off and landing, to minimise the possibility of ammunition spilling in the event of an incident or accident; and
- Note:** The method of securely closing the container must be robust enough to withstand a reasonably high amount of force, noting the intent is to prevent ammunition spilling during an accident.
- the ammunition container(s) must be stowed and secured in the aircraft in a manner that will prevent any movement in flight which would change their orientation (i.e. restrained to hard points inside the aircraft that are within easy reach of the shooter or securely stowed in an internal compartment within the cabin); and
  - the loading of the ammunition onto the aircraft must be supervised by the operator; and
  - the dangerous goods (i.e. ammunition) must be:
    - under the control of trained personnel (i.e. the task specialist) during the time when they are in use on the aircraft; and
    - the ammunition is to be inspected for damage or leakage prior to loading; and
    - the ammunition may only be carried with the approval of the operator; and
    - the pilot in command is to be notified of the location where the ammunition is loaded on board the aircraft and, in the event of a crew change, this information must be passed on to the next crew; and
  - all personnel must report any dangerous goods accident or dangerous goods incident (as defined within regulation 92.010) that occurs while undertaking company operations to CASA (in writing) within 2 working days of the event occurring, including those that occur during positioning flights requiring the carriage of ammunition for this operation (as per regulation 92.065); and
  - for the carriage of ammunition as dangerous goods, pilots and other crew members must ensure that the ammunition:
    - does not include ammunition with explosive or incendiary projectiles; and
    - is limited to the quantities required for the operation being conducted; and
    - is limited to ammunition classified in:
      - o Division 1.4S (UN 0012 and UN 0014 only); or
      - o Division 1.4E (UN 0471 Articles, explosive, n.o.s. (bird scaring cartridges only)); or
      - o Division 1.4G (UN 0431 Articles, pyrotechnic (Bird scaring cartridges only) or UN 0312 Cartridges, signal (Bird scaring cartridges only)).

### **GM 138.432 Possessing and discharging firearms**

This regulation allows the Part 138 MOS to prescribe requirements related to possessing and discharging firearms in flight. Subregulation 138.432 (4) states that the regulation applies

despite regulations 91.160, 91.165 and 91.190. This means the Part 91 provisions do not apply if the Part 138 MOS requirements are met.

Subsection 17.03(2) of the Part 138 MOS outlines 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 Division 3 of Chapter 17 are complied with.

The applicable requirements of Division 3 are outlined in sections 17.04, 17.05, 17.06, 17.07 and 17.07.

Section 17.06 outlines the requirements for the task specialist to discharge the firearm and specially outlines that the task specialist must:

1. be authorised to carry, otherwise possess and discharge the firearm by a law of the Commonwealth, the State or the Territory.
2. 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 category of aircraft (aeroplane or helicopter) to be used in the operation.

This training must be based on a written syllabus and conducted either by the operator, in accordance with a firearms possession and use training program set out in the operator's operations manual, or an aerial platform shooting training organisation whose course is accredited for this purpose by an authority of a State or Territory.

For the purposes of subsection 17.03(2), CASA considers a course which has been found to be acceptable by an authority of a State or Territory for the training of their personnel, or their aerial shooting contractor's personnel, meets the applicable requirements of Division 3 of Chapter 17.

#### *Discharge of firearm during training*

Section 17.06 and this required training course are both applicable requirements of Division 3 of Chapter 17, as outlined in subsection 17.03(2). As the training course must include training about the discharging of the firearm, any discharging of the firearm during this training is authorised under the applicable requirements outlined in subsection 17.03(2) and may be carried out as part of the training.

Subsection 17.07(3) of the Part 138 MOS requires that a person discharging a firearm from an aircraft be a task specialist, i.e. they cannot be an aerial work passenger. An operator will therefore need to ensure that these kinds of persons meet the requirements of the Division 138.P.2 regulations and Chapter 25 of the Part 138 MOS.

Division 3 of Chapter 17 of the Part 138 MOS applies to all operators that conduct aerial work operations, regardless of whether the operator holds an AWC. However, operators without an AWC will not have an approved operations manual; accordingly, they will be unable to conduct the required training for any personnel. To ensure compliance with the regulatory requirements, a limited AWK operator will therefore need to send their shooters to an accredited aerial platform shooting training organisation, or an AWC holder approved to conduct such training, and use an organisation approved to conduct the relevant AWK pilot training to train pilots involved in these activities.

*Ammunition*

Ammunition is classified as dangerous goods. The carriage of ammunition on board an aircraft must therefore be in accordance with the requirements of Part 92 Consignment and carriage of dangerous goods by air.











- date and time of recording, or a reliable means of establishing these parameters
- amount of flight hours recorded during the day plus total flight time
- N1 (gas producer RPM) cycle count
- N2 (power turbine RPM) cycle count (if the engine features a free turbine)
- turbine temperature exceedance: value, duration
- power-shaft torque exceedance: value, duration (if a torque sensor is fitted)
- engine shafts speed exceedance: value, duration.

Data storage of the above parameters, if applicable, should cover the maximum flight time in a day, and not less than 5 flight hours, with an appropriate sampling interval for each parameter.

The system should include a comprehensive self-test function with a malfunction indicator and a detection of power-off or sensor input disconnection.

A means should be available for the download and analysis of the recorded parameters. Download frequency should be sufficient to ensure data are not lost through overwriting.

The analysis of parameters gathered by the UMS, the analysis methodology and the frequency of such analysis should be described in the operator's exposition UMS management procedures, and any subsequent maintenance actions generated by that analysis must be described in the aircraft's maintenance documentation.

The data should be stored in an acceptable form and accessible to CASA for at least 24 months.

Where a Full Authority Digital Engine Control (FADEC) system is already being used to record some of the parameters described in this subsection, it is not intended that recording of those parameters are duplicated with an alternative device.

For rotorcraft which do not have installed UMS, off-the-shelf products such as an airborne image recording system (AIRS) with the capability to record, store and which permit the download and analysis of the parameters outlined above (as applicable to the rotorcraft), may be suitable for this task.

Where an AIRS is used to meet the UMS requirements, operators need to be aware of the limitations relating to such devices that are contained in Part IIIB Protection of CVR (Cockpit Voice Recording) Information of the Civil Aviation Act. To be able to use an AIRS to satisfy the UMS requirements without contravening this Part of the Civil Aviation Act, the images recorded of the flight deck would need to be limited to images of the instrument panel only. Any images of persons on the flight deck would need to be limited to transient images only (for example, a hand adjusting the QNH on an altimeter). Any recording of ambient flight deck sounds would need to be disabled (if the AIRS has this function) so that the information recorded does not constitute CVR information<sup>16</sup>.

Any UMS to be utilised in aerial work operations, must remain, a reliable, accurate, comprehensive and continuously operating system and paragraph 22.06 of the Part 138

<sup>16</sup> Note that the phrase CVR information is defined in section 32AN of the Act, and that the term CVR or cockpit voice recording is also defined in section 32AO of the Act. Note that the definition of CVR is used solely within Part IIIB of the Act and this definition does not legally apply to the mentions of CVR in the regulations and manuals of standards.

MOS requires the data to be downloaded and safely stored by the operator for use in managing the aircraft's continuing airworthiness requirements.









- the training organisation has a system under which successful completion of the competency checking is certified on the training organisation's relevant checking form by an employee of the training organisation who is also a delegate of the NAA for certifying flight crew competency of the kind checked; and
- the operator's operations manual includes the details of the training organisation's syllabus and completion standards for the training and/or checking event(s); and
- the foreign State is one recognised by CASA for the purposes of foreign flight simulators under regulation 61.010.

**Note:** Advisory Circular AC 60-02 v2.2 states that CASA currently recognises the flight simulator qualification certificates of countries listed under the definition of *recognised foreign State* in regulation 61.010. At the time of issuing v2.1 of this AMC/GM document, those countries were Canada, Hong Kong (Special Administrative Region of China), New Zealand, the United States of America, Belgium, Czech Republic, Denmark, Finland, France, Germany, Ireland, Italy, the Netherlands, Norway, Portugal, Spain, Sweden, Switzerland and the United Kingdom.

### **GM 138.505 Training and checking to be conducted by certain persons**

#### *Nomination of training / checking personnel*

The regulation and Division 3 of Chapter 23 of the Part 138 MOS set out the requirements for an individual to conduct training and checking activities. One of the requirements is that an individual must be nominated in writing<sup>17</sup>. The nomination must be made by an entry in the operator's operations manual, or a document provided by the operator to CASA, and state that the individual meets the requirements<sup>18</sup>.

The intent of this provision is that, regardless of which notification method is used, either document is considered to be part of an operator's operations manual. However, to remove any confusion on the submission format, the MOS makes it clear that the operator may elect to use a simple nomination form rather than requiring submission of the complete operations manual.

As with any change for an operator, the nomination of an individual to training and checking duties should be considered against the definition of significant change<sup>19</sup> and the operator's management of change procedure. For most nominations this would NOT be considered as a significant change.

**Note:** Operators should particularly review paragraph 138.012 (c) and (d).

For example, an operator could maintain a list of the authorised training and checking individuals. When a change to the nominated individuals occurred, the new list could be attached to the significant change / non-significant change CASA form<sup>20</sup>. As with any change notification, the change to the document should be clearly identified.

<sup>17</sup> paragraph 23.10(2)(d) of the Part 138 MOS

<sup>18</sup> subsection 23.10(3) of the Part 138 MOS

<sup>19</sup> regulation 138.012

<sup>20</sup> Refer also to AC 119-07,138-03 – [Management of change for aviation organisations](#)

**EXAMPLE FORM****SAMPLE AVIATION –Training and Checking Personnel – Part 138 Operations**

<b>Name</b>	<b>ARN</b>	<b>Aircraft type</b>	<b>Authorised duties</b>
Hawk	456712	B200	Flight crew line training and line checks
Goose	123456	B200	All training and checking duties
Finch	562389	B200 Eurocopter AS350	General emergency training
Sparrow	987654	All	Flight crew proficiency checks Part 61 Flight Examiner duties
Bird	563489	All	Air crew member training and checking duties





			Part 61 Flight Examiner duties
Bird	563489	All	Air crew member training and checking duties

## 10.2 Division 138.P.2—Task specialists

### AMC 138.575 Application of Division 138.P.2

Reserved

#### GM 138.575 Application of Division 138.P.2

A task specialist is a crew member who carries out a function related to the aerial work operation in flight. Examples of a task specialist would include a camera operator in an aerial filming operation, or a shooter in an aerial culling operation. A task specialist does not have a safety-related role for the flight of the aircraft, as distinct from an air crew member.

Where there is doubt as to whether someone is or is not a task specialist, the Part 138 MOS may prescribe a person to be either included or excluded from the definition of task specialist. Refer to section 3.02 of the Part 138 MOS.

### AMC 138.580 Qualifications and training

Reserved

#### GM 138.580 Qualifications and training

Chapter 25 of the Part 138 MOS provides operators with scalable, outcome-based training and checking requirements appropriate to the size and complexity of their operations.

Where an aerial work operator carries a task specialist, the operator's operations manual will need to describe how they train that person to ensure that they are competent in carrying out the normal, abnormal, and emergency procedures relevant to the task specialist role.

The operator will also need to describe who will conduct the training and checking of the task specialist, and what the minimum qualifications are for a person to fulfil the role of a task specialist trainer and/or checking person

In the simplest of operations, it may be possible to conduct the training and checking as part of a pre-flight briefing by the PIC, provided the pilot is satisfied that the briefing can adequately cover the relevant procedures and the task specialist is competent to carry them out.

**AMC 138.590 Training and checking to be conducted by certain persons**

Reserved

**GM 138.590 Training and checking to be conducted by certain persons**

Reserved