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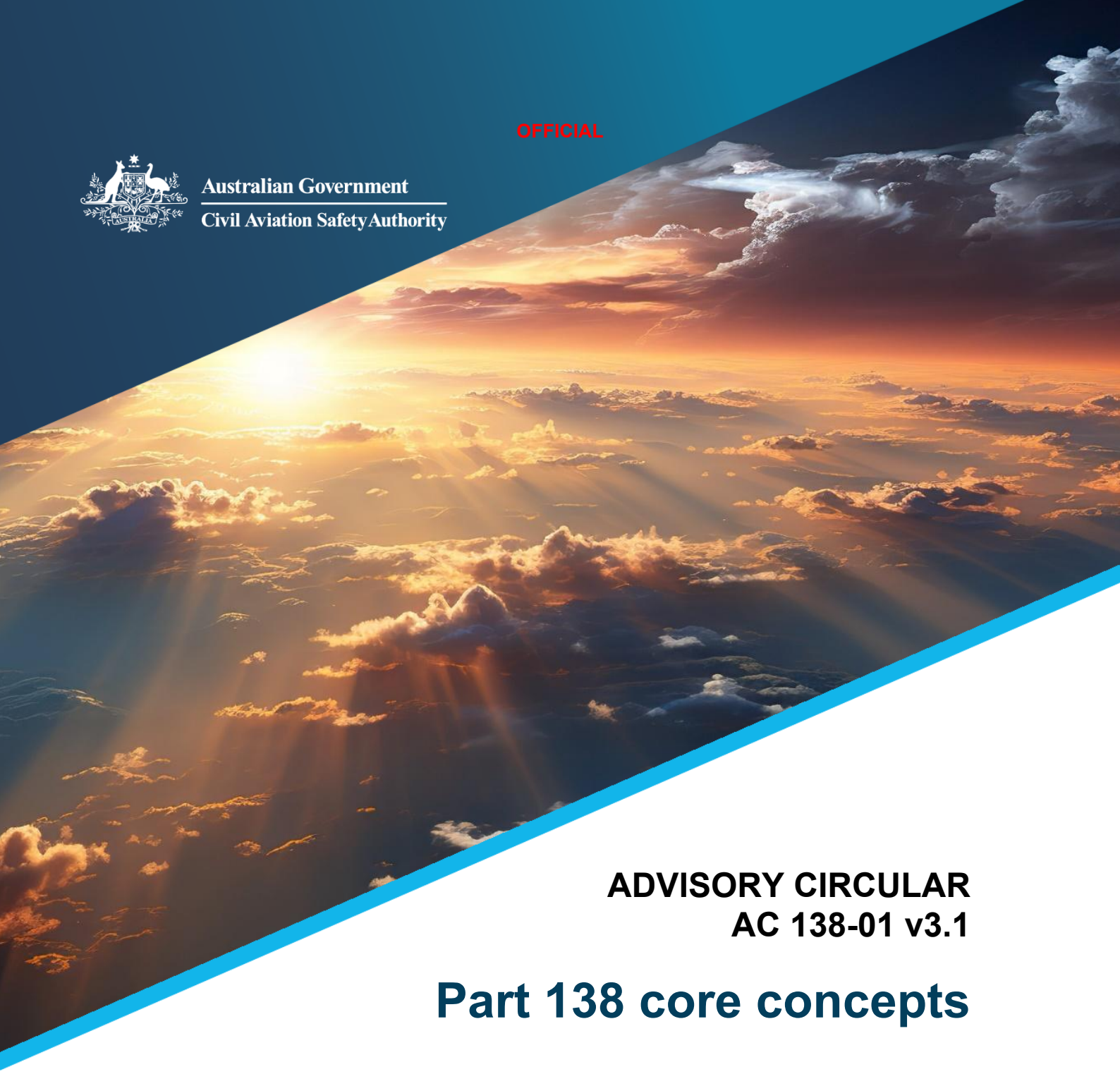

ADVISORY CIRCULAR
AC 138-01 v3.1

Part 138 core concepts

File ref: D25/272596

July 2025

Acknowledgement of Country

The Civil Aviation Safety Authority (CASA) respectfully acknowledges the Traditional Custodians of the lands on which our offices are located and their continuing connection to land, water and community, and pays respect to Elders past, present and emerging.

Artwork: James Baban.

Advisory circulars are intended to provide advice and guidance to illustrate a means, but not necessarily the only means, of complying with the Regulations, or to explain certain regulatory requirements by providing informative, interpretative and explanatory material.

Advisory circulars should always be read in conjunction with the relevant regulations.

Audience

This advisory circular (AC) applies to:

- pilots and operators currently conducting, or planning to conduct, commercial aerial work operations regulated by Part 138 of the *Civil Aviation Safety Regulations 1998 (CASR)* and the Part 138 Manual of Standards (MOS)
- pilots currently conducting, or planning to conduct, private aerial work operations regulated by Part 138 and the Part 138 MOS.

Purpose

This AC provides high level guidance and explanation regarding Part 138 and its core concepts.

For further information

For further information or to provide feedback on this AC, visit CASA's contact us page.

Unless specified otherwise, all subregulations, regulations, Divisions, Subparts and Parts referenced in this AC are references to the *Civil Aviation Safety Regulations 1998 (CASR)*.

Status

This version of the AC is approved by the National Manager, Flight Standards Branch.

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

Table 1. Status

Version	Date	Details
v3.1	July 2025	Minor amendment to some paragraphs in section 2.3 arising from feedback that the kinds of aerial work operations could be more directly outlined. Added a reminder in section 3.7 (fireground personnel carriage operations) that the aircraft certification requirements for the carriage of aerial work passengers have not changed.
v3.0	July 2025	The following updates have been made, associated with the introduction of fireground personnel carriage operations as a new kind of aerial work operation: • section 2.3 classification of aerial work activities • section 2.6 transitional arrangements • section 3.2 aerial work zone • new section 3.3 aerial work zone risk assessments • re-numbered and updated section 3.4 persons permitted onboard during aerial work operations • re-numbered and updated section 3.5 rotorcraft performance • all new section 3.7 fireground personnel carriage operations • section 4.2 which operators are required to have a Part 138 training and checking system • section 5 safety management systems • new Appendix B highlighting essential, and potential, operations manual content • new Appendix C providing a sample fireground emergency organisation risk awareness briefing and operational training requirements.
v2.1	March 2025	Minor updates to exemption instrument identifiers. Minor updates to section 4.1 Overview of requirements for Training and Checking.
v2.0	April 2024	Chapter 4 has been substantially re-written to focus on containing guidance about operator-based training and checking under Part 138 of CASR. This guidance complements dedicated guidance in Multi-Part AC 119-11 and AC 138-02 about training and checking systems, which applies to operators required by the rules, or who voluntarily decide to use, a formal training and checking system. The previous v1.0 chapter 4 SMS content has been moved to a new chapter 5.
v1.1	January 2023	Updated the Legislation, Advisory Material and Forms section. Added a new paragraph 2.3.7 with an example of what is not an aerial work operation.
v1.0	July 2021	Initial AC.

Contents

1 Reference material

1.1 Acronyms

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

Table 2. Acronyms

Acronym	Description
AC	advisory circular
AMC	acceptable means of compliance
AFM	aircraft flight manual
AOC	air operator's certificate
AWZ	Aerial Work Zone
AWZ-RA	Aerial Work Zone Risk Assessment
CAO	Civil Aviation Order
CAR	*Civil Aviation Regulations 1988*
CASA	Civil Aviation Safety Authority
CASR	*Civil Aviation Safety Regulations 1998*
ESO	emergency service operation
GM	guidance material
HOTC	head of training and checking
IFR	instrument flight rules
MOS	Manual of Standards
MTOW	maximum take-off weight
NVIS	night vision imaging system
OEI	one engine inoperative
PIC	pilot in command
SM	safety manager
SMS	safety management system
T&C	training and checking
VMC	visual meteorological conditions

1.2 Definitions

Terms that have specific meaning within this AC are defined in the table below. Where definitions from the civil aviation legislation have been reproduced for ease of reference, these are identified by 'grey shading'. Should there be a discrepancy between a definition given in this AC and the civil aviation legislation, the definition in the legislation prevails.

Table 3. Definitions

Term	Definition
aerial work operation	1. An aerial work operation means one or more of the following (and each of the following is a kind of aerial work operation): a. an external load operation; b. a dispensing operation; c. a task specialist operation; d. an operation of a kind prescribed by the Part 138 Manual of Standards for the purposes of this paragraph. **Note:** A *fireground personnel carriage operation* is prescribed to be a kind of aerial work operation in section 3.01AA of the Part 138 MOS. 2. Despite subregulation (1), an aerial work operation does not include the following: a. a medical transport operation; b. an external load operation involving winching a person, if the operation is conducted as part of an air transport operation; c. glider towing; d. a person undertaking a parachute descent; e. an aerial application operation (including any external load operation undertaken as part of that operation) to apply fire retardants (including water), or oil or chemical dispersants, if the operation is conducted by a person holding a civil aviation authorisation under Part 137 to undertake the operation; f. any other aerial application operation; g. any other operation of a kind prescribed by the Part 138 Manual of Standards for the purposes of this paragraph. **Note:** Multiple operations are prescribed to not be an aerial work operation in section 3.01 of the Part 138 MOS. These operations include an aircraft towing a thing where the requirement in paragraph 91.210(2)(a) of CASR is met, the flight test of an experimental aircraft conducted under an experimental certificate, a maintenance test flight, a thing dropped by a person undertaking a parachute descent under Part 105 of CASR, and aerial spotting carried out in a weight-shift-controlled aeroplane type certificated in the primary category where the operation is administered by a sport aviation body.
aerial work operator	means the holder of an aerial work certificate.
aerial work passenger	see section 2.02 of the Part 138 Manual of Standards.
air crew member	means a crew member for a flight of an aircraft (other than a flight crew member) who carries out a function during the flight relating to the safety of the operation of the aircraft, or the safety of the use of the aircraft.
crew member	a person is a crew member of an aircraft if the person is carried on the aircraft and is:

Term	Definition
	a. a person: i who is authorised by the operator of the aircraft to carry out a specified function during flight time relating to the operation, maintenance, use or safety of the aircraft, the safety of the aircraft's passengers or the care or security of any cargo which may affect the safety of the aircraft or its occupants; and ii who has been trained to carry out that function; or b. a person who is on board the aircraft for the purpose of: i giving or receiving instruction in a function mentioned in subparagraph (a)(i); or ii being tested for a qualification associated with a function mentioned in subparagraph (a)(i); or c. a person authorised by CASA under these Regulations, or by the operator, to carry out an audit, check, examination, inspection or test of a person mentioned in paragraph (a) or (b).
dispensing operation	means dropping or releasing any substance or object from an aircraft in flight and includes training for such an operation.
emergency service operation	means an operation involving an aircraft to which all of the following apply: a. the operation is conducted by, or at the request of, an authority of the Commonwealth, a State or a Territory; b. the authority is prescribed by the Part 138 Manual of Standards for the purposes of this paragraph; c. the operation is for: i law enforcement purposes; or ii the purpose of saving or protecting persons, property or the environment. **Note:** Section 3.03 of the Part 138 MOS prescribes the Australian Federal Police, Australian Defence Force, Australian Maritime Safety Authority, Australian Border Force, State or Territory police services, State or Territory fire services, State or Territory emergency services, State or Territory parks, wildlife or forestry services and State or Territory surf lifesaving services as authorities for paragraph (b) of this definition.
ESO	means an aerial work operation that is part of an emergency service operation, other than a fireground personnel carriage operation. Note: The term emergency service operation is defined in the CASR Dictionary, and the term fireground personnel carriage operation is defined in subsection 1.04 (6) of this MOS.
external load operation	means carrying or towing a load outside an aircraft in flight and includes training for such an operation.
fireground emergency organisation	means an authority mentioned in: a. paragraph 3.03 (f); or b. paragraph 3.03 (h) — but only to the extent that the authority mentioned engages in firefighting, or protecting or saving wildlife from an active fire. **Note:** The references to section 3.03 relate to section 3.03 of the Part 138 MOS.

Term	Definition
fireground personnel carriage operation	means an operation: a. conducted by an aerial work certificate holder, for hire or reward, which is tasked by a fireground emergency organisation to carry passengers in a helicopter for the operation: i from a fire helibase in the vicinity of a relevant fireground to the fireground, or from one part of a relevant fireground to another part of the fireground, to carry out a relevant ground activity; or ii from a relevant fireground to a fire helibase in the vicinity of the fireground, after carrying out a relevant ground activity; and b. that involves carrying passengers in a helicopter, for the operation, in accordance with the task mentioned in paragraph (a); and c. unless an exemption under Part 11 of CASR is applicable to, and being used by, the holder — for which the holder meets the requirements stated in paragraphs 4.02(1)(f) and 5.02(1)(a), and Chapter 17A. Note 1 The passengers are aerial work passengers by virtue of section 2.02. *[sic - of the Part 138 MOS]* Note 2 An effect of this definition is that if any of the elements of the definition are not met, then the transport of the passengers is either a private operation but only if the aerial work certificate holder is not conducting the operation for hire or reward, or a Part 133 operation, with its attendant obligations, if the holder is conducting the operation for hire or reward. Note 3 Another effect of this definition is that a fireground personnel carriage operation cannot be conducted by a limited aerial work operator.
fire helibase	for a fireground personnel carriage operation, means a safe area: a. at which passengers, who are carried in a helicopter for the operation, assemble, to embark on a helicopter at the start of the operation; or b. to which passengers, who are carried in a helicopter for the operation, are returned, to disembark on completion of the operation.
flight crew member	means a crew member who is a pilot or flight engineer assigned to carry out duties essential to the operation of an aircraft during flight time.
limited aerial work operator	means an operator who conducts a limited aerial work operation.
non-normal exercise	means an aircraft flight that involves the simulated failure of a vital system.
operational safety-critical personnel	for an Australian air transport operator, an aerial work operator or a balloon transport operator: a. means personnel carrying out, or responsible for, safety-related work, including: i personnel carrying out roles that have direct contact with the physical operation of aeroplanes, rotorcraft or Part 131 aircraft used in the operator's Australian air transport operations, aerial work operations or balloon transport operations; and ii personnel carrying out roles that have operational contact with personnel who operate aeroplanes, rotorcraft or Part 131 aircraft used in those operations; and iii personnel described as operational safety-critical personnel in the operator's exposition or operations manual; but

Term	Definition
	b. does not include personnel who are employed or engaged by the operator (whether by contract or other arrangement) and are engaged in: i the provision of continuing airworthiness management services for aeroplanes, rotorcraft or Part 131 aircraft used in the operator's Australian air transport operations, aerial work operations or balloon transport operations; or ii carrying out maintenance on an aeroplane, rotorcraft, Part 131 aircraft or aeronautical product on behalf of an approved maintenance organisation.
operator	of an aircraft, means: a. if the operation of the aircraft is authorised by an AOC, a Part 141 certificate or an aerial work certificate—the holder of the AOC or certificate; or b. otherwise—the person, organisation or enterprise engaged in aircraft operations involving the aircraft.
personnel	a. for an Australian air transport operator, an aerial work operator or a balloon transport operator, includes any of the following persons who have duties or responsibilities that relate to the safe conduct of the operator's Australian air transport operations, aerial work operations or balloon transport operations: i an employee of the operator; ii a person engaged by the operator (whether by contract or other arrangement) to provide services to the operator; iii an employee of a person mentioned in subparagraph (ii); or b. for an ASAO, includes any of the following persons who have duties or responsibilities that relate to the safe performance of the ASAO's approved functions: i an employee of the ASAO; ii a person engaged by the ASAO (whether by contract or other arrangement) to provide services to the ASAO; iii an employee of a person mentioned in subparagraph (ii); iv a person appointed by the ASAO to perform an approved function on behalf of the ASAO.
positioning flight	a. a flight of an aircraft to position aerial work cargo, or an aerial work passenger, in order to prepare for and carry out an aerial work operation; and b. a flight to reposition or remove aerial work cargo or an aerial work passenger on completion or cancellation of an aerial work operation, or of that part of the operation, to which a positioning flight related. **Explanatory note (not included in the definition):** Fireground personnel carriage operations cannot conduct positioning flights, refer to section 17A.03 of the Part 138 MOS.
relevant fireground	means one or more of the following, which is notified by a fireground emergency organisation to the operator for a flight that is a fireground personnel carriage operation to be, be within, or be in the vicinity of, a fireground:

Term	Definition
	a. an area involved in active fire, including burning and burnt areas; b. an area immediately threatened by fire, including any adjoining property; c. an area where fire suppression is required or taking place; d. an area where any of the following are deployed for use in the area or a related area: i firefighters; ii firefighting appliances; iii firefighting equipment; e. an area where fire containment lines are constructed or proposed to be constructed; f. a road, or access point, under traffic management control, relating to any of the areas mentioned in paragraphs (a) to (e); g. a track, amenity, facility or structure.
relevant ground activity	for a fireground personnel carriage operation, means any activity by passengers, who are carried in a helicopter for the operation, at a relevant fireground, with or without equipment, for the purpose of saving or protecting persons, property or the environment, including, for that purpose, any of the following: a. attacking, stopping, slowing, blocking, redirecting, controlling, observing, or extinguishing the fire, or any similar activity; b. observing, recuing, or humanely addressing in the most appropriate manner, the effects of the fire on domesticated animals or wildlife.
task specialist	1. A task specialist, for an aerial work operation, means a crew member for a flight: a. who carries out a function for the flight relating to the aerial work operation; and b. who is not a flight crew member or an air crew member for the flight. 2. Despite subregulation (1), a task specialist: a. includes a crew member of a kind prescribed by the Part 138 Manual of Standards for the purposes of this paragraph; and b. does not include a crew member of a kind prescribed by the Part 138 Manual of Standards for the purposes of this paragraph. **Notes:** 1. Section 3.02 of the Part 138 MOS specifies a flight crew member to be a task specialist where they are the only crew member on an aircraft conducting a task specialist operation. 2. Section 3.02 of the Part 138 MOS specifies an air crew member to be a task specialist if the air crew member is required to carry out a task specialist function on the flight and they has been trained and found competent to carry out the function. 3. Section 3.02 of the Part 138 MOS specifies that a person is a task specialist during a flight conducted solely to position for a subsequent task specialist operation, where the person is carried in order to be the task specialist for the subsequent operation.
vital system	means a system whose simulated failure in flight would adversely affect the safety of the aircraft as compared to normal operation.

1.3 References

Legislation

Legislation is available on the Federal Register of Legislation website https://www.legislation.gov.au/

Table 4. Legislation references

Document	Title
Part 91 of CASR	General Operating and Flight Rules
Part 133 of CASR	Australian Air Transport Operations - Rotorcraft
Part 137 of CASR	Aerial Application Operations
Part 138 of CASR	Aerial Work Operations
Part 91 MOS	Part 91 (General Operating and Flight Rules) Manual of Standards 2020
Part 133 MOS	Part 133 (Australian Air Transport Operations - Rotorcraft) Manual of Standards 2020
Part 138 MOS	Part 138 (Aerial Work Operations) Manual of Standards 2020
CAO 48.1 Instrument 2019	**Note:** This CAO has no specific topic title. It contains requirements and limits relating to flight crew fatigue.
CASA EX67/24	Part 91 of CASR - Supplementary Exemptions and Directions Instrument 2024
CASA EX72/24	Part 138 and Part 91 of CASR - Supplementary Exemptions and Directions Instrument 2024
CASA EX73/24	Flight Operations Regulations - SMS, HFP&NTS and T&C Systems - Supplementary Exemptions and Directions Instrument 2024

Advisory material

CASA's advisory materials are available at https://www.casa.gov.au/publications-and-resources/guidance-materials

Table 5. Advisory material references

Document	Title
AC 1-01	Understanding the legislative framework
AC 1-02	Guide to the development of expositions and operations manuals
AC 1-03	Transitioning to the flight operations regulations
AC 11-04	Approvals under CASR Parts 91, 103, 119, 121, 129, 131, 132, 133, 135, 138 and 149 (including MOS)
AC 91-13, 133-09 and 138-06	Night vision imaging - helicopters
AC 91-19, 121-04, 133-10, 135-12 and 138-10	Passenger safety information
AC 119-01	Safety management systems for air transport operations
AC 119-07 and 138-03	Management of change for air transport and aerial work operators
AC 119-11 and 138-02	Training and checking systems
AC 138-05	Aerial work risk management
Part 91 AMC/GM	Acceptable Means of Compliance / Guidance Material (General Operating and Flight Rules)
Part 119 AMC/GM	Acceptable Means of Compliance / Guidance Material (Australian air transport operators - certification and management)
Part 138 AMC/GM	Acceptable Means of Compliance / Guidance Material (Aerial Work Operations)
	Head of training and checking guide
	Part 133, Part 135 and Part 138 sample training and checking manuals and associated guide **Notes:** 1. This package consists of 3 documents: the Part 133, Part 135 and Part 138 sample training and checking manual (contains content relevant to multiple kinds of crew members), the Part 133/135/138 sample training and checking manual (limited to flight crew member content only) and the Guide to Part 133/135/138 sample training and checking manuals. 2. These document are available on the CASA webpage 'Industry compliance templates'.
	Part 138 sample operations manual template (Mustering) and associated guide **Note:** This sample document is available on the CASA webpage 'Industry compliance templates'.
	Safety manager guide
	CASR Flight Operations sample exposition / operations manual and associated guide

Document	Title
	Notes: 1. This sample document is available on the CASA webpage 'Industry compliance templates'. 2. This sample applies to Part 133, Part 135 and Part 138 operators.

1.4 Forms

CASA's forms are available at http://www.casa.gov.au/forms

Table 6. Forms

Form number	Title
	Application - Aerial Work Operations (CASR Part 138)
	Notification - non-significant changes CASR Parts 119, 131 and 138
	FOR Transition - Training and checking system (Parts 119, 133, 135 and 138 of CASR)

2 Overview of Part 138

2.1 Scope, content and general principle of the Part

2.1.1 Part 138 and its associated MOS bring together the certification, operational, procedural and safety risk management requirements affecting aerial work operations. Part 138 applies to aerial work operations conducted by aeroplanes and rotorcraft.

> **Note:** Numerous Part 91 rules still apply during the conduct of an aerial work operation. Further information on the legislative framework is available in AC 1-01 - Understanding the legislative framework.

2.1.2 The Part 138 rules are based on the risk inherent to the activity being undertaken, from simple aerial work tasks with a single pilot, to complex aerial work tasks involving the use of multi-crew transport category aircraft.

2.1.3 Under the *Civil Aviation Regulations 1988* (*CAR*) and Civil Aviation Orders (CAO) that applied prior to the commencement of Part 138, aerial work activities were largely regulated through a series of bespoke exemptions and permissions. The Part 138 rules significantly reduce the need for exemptions due to the inclusion of nationally consistent and transparent standards, many of which are outcome-based.

2.2 Classification of aerial work activities

2.2.1 The kinds of operations that constituted 'aerial work for commercial purposes' were previously described in paragraph 206(1)(a) of CAR. This paragraph listed the activities considered to be aerial work and included activities determined to be 'substantially similar' to the prescribed activities. To provide clarity to the industry, the combination of prescribed activities and substantially similar activities became a list of 42 unique aerial work activities that were identified in the Air Operator's Certificate Handbook and, when conducted for commercial purposes, required the issue of an AOC.

2.2.2 In practical terms, all previous aerial work activities under CAR have transitioned across under CASR to become task specialist operations as their primary activity with further specialisation reflected, as necessary, in the dispensing and external load classifications. An exception is that air ambulance aerial work has transitioned to become a medical transport operation which is regulated by the air transport rules (further information is located in the Part 119 AMC/GM document).

2.2.3 As at publishing v3.0 of this AC, aerial work operations are split into the following 4 activities[1]:

- **dispensing operations** - dropping or releasing any substance or object from an aircraft in flight and includes training for such an operation. An example of a dispensing operation is incendiary dropping or dropping of baits.
- **external load operations** - carrying or towing a load outside an aircraft in flight and includes training for such an operation. Examples of external load operations are banner towing by an aeroplane or a helicopter sling load operation.
- **task specialist operations** - carrying out a specialised activity using an aircraft in flight and includes training for such an activity. An example of a task specialist operation is a low level weed survey or pipeline inspection.

[1] The kinds of defined activities that constitute aerial work operations are specified in regulation 138.010 of CASR and, as permitted by the regulation, section 3.01AA of the Part 138 MOS.

- **fireground personnel carriage operations** - an operation that meets the definition of this term in the Part 138 MOS.

2.2.4 Due to its specific MOS reference as an aerial work operation, fireground personnel carriage operations are not task specialist operations; however, they can be combined with task specialist operations that are either aerial spotting or aerial photography, where this is necessary to accomplish the overall tasking of the flight.

2.2.5 Subregulation 138.010(5) of CASR, and section 3.01 of the Part 138 MOS, legally exclude certain operations from being captured by the definition of aerial work operation and its subordinate 4 kinds[2] of aerial work For example, external load operations conducted as part of medical transport operations under Part 133, and aerial application operations conducted under Part 137, are not, by definition, aerial work operations.

2.2.6 An aerial work operation may involve one, or a combination of any of the above 3 core activities, but fireground personnel carriage operations may only be combined with aerial spotting or aerial photography task specialist operations.

2.2.7 Regulation 138.400 of CASR uses the CASR Dictionary defined term *emergency service operation*. The Part 138 MOS uses the defined term *ESO*. In both cases, a critical point is that ESO's are not automatically an aerial work operation. The reason these terms are used in Part 138 is because if an operation is an aerial work operation first, and then an ESO second, sometimes the Part 138 rules provide additional flexibility for such operations.

Note: Fireground personnel carriage operations are excluded from being an ESO for the purposes of where the term ESO is used in the Part 138 MOS. See the definition of ESO in subsection 1.04(6) of the Part 138 MOS.

2.2.8 A commonly misunderstood concept is whether, and when, a task specialist operation is being conducted. For a task specialist operation to be conducted, the aircraft must carry out a specialised activity in-flight, as distinct from the aircraft carrying a person from place to place who performs a specialised activity on the ground.

Example 1

A surveyor is carried onboard a helicopter for the purpose of obtaining multiple soil samples or geolocation readings over short distances. Although the helicopter may land every several hundred meters for the purpose of the soil sample or other reading, the helicopter does not carry out any activity other than moving the person from location to location with a normal landing at each new location.

As the helicopter does not carry out any specialised activity in-flight and the purpose of the flight is passenger carriage, these flights are a Part 133 passenger transport operation where the operator must hold an Australian air transport AOC.

Example 2

A person can be carried from place to place in a helicopter for hire or reward during a fireground personnel carriage operation, but this is not a task specialist operation.

As this kind of operation is defined to be an aerial work operation, it is automatically excluded from being an air transport operation and therefore the operator does not need to comply with Parts 119 or 133 or hold an Australian air transport AOC.

[2] Dispensing, external load, fireground personnel carriage and task specialist.

Example 3

A person can be carried from place to place, either for hire or reward or without a commercial purpose, where they are a marine pilot being transported from shore to ship, ship to ship, or ship to shore, because there are specialised activities associated with these operations in-flight and therefore this kind of passenger carriage is a task specialist operation.

Example 4

A person can be carried from place to place, either for hire or reward or without a commercial purpose, where the overall operation is an aerial work operation, even if the operation consists of multiple flights, where a limited number of flights before or after the flight where the specific aerial work purpose is being conducted, provided the before or after flights fit within the definition of positioning flight in the Part 138 MOS.

2.3 When must an operator hold an aerial work certificate?

2.3.1 Under the CAR and CAO that applied prior to the commencement of Part 138, operators who conducted aerial work operations for a commercial purpose were required to hold an air operator's certificate (AOC).

2.3.2 Except for operators conducting a limited subset of aerial work operations, under Part 138 of CASR, all operators conducting aerial work operations are required to hold an aerial work certificate in place of an AOC. That is, aerial work conducted even without a commercial purpose is still required to comply with Part 138 of CASR.

IMPORTANT

Operators conducting aerial work activities as a private operation under the rules in force before 2 December 2021 are now required, unless subregulation 138.030(2) of CASR applies to the activity, to obtain, and operate under, an aerial work certificate[3].

2.3.3 Regulation 138.030 of CASR outlines who is required to hold an aerial work certificate to conduct aerial work operations. In the Part 138 MOS this kind of person is called an *aerial work certificate holder*. In the Part 138 regulations or in the CASR dictionary, this person is called an aerial work operator. Subregulation 138.030(2) of CASR specifies the exceptions to the general requirement to hold an aerial work certificate when conducting an aerial work operation.

Note: See AC 1-03 for a description of how an existing aerial work AOC holder transitions to becoming an aerial work certificate holder.

2.3.4 The operations encompassed by subregulation 138.030(2)—those that don't require an aerial work certificate—are similar to the operations that, before 2 December 2021, were listed in paragraph 2(7)(d) of CAR as *private operations*. In the Part 138 MOS, these operations are called limited aerial work operations. In Part 138 there are only a limited number of rules that do not apply to these operations and limited aerial work operators will need to be familiar and comply with the regulations and MOS content that are applicable to their operation.

[3] See regulation 138.030 of CASR.

2.4 Part 138 interactions with Part 91

2.4.1 Part 91 of the *Civil Aviation Safety Regulations 1998* (CASR) and its associated MOS consolidate the general operating and flight rules. They replace a significant number of CARs, CAOs, supporting instruments and exemptions. The Part 91 rules cover matters such as minimum heights, required fuel, the safety of persons on board and much more[4].

2.4.2 Many aerial work operations could not be conducted if they had to be compliant with all the Part 91 rules. For example, regulation 91.267 of CASR would prevent the carrying out of low level close-proximity operations such as mustering. To enable appropriate alleviations from the Part 91 rules, regulation 91.035 disapplies multiple Part 91 rules when a particular Part 138 rule is being complied with. Additionally, regulation 138.375 of CASR disapplies the Part 91 minimum height rules subject to the conditions specified in Chapter 9 of the Part 138 MOS.

2.4.3 Recognising that the absence of certain Part 91 rules could result in a lower level of aviation safety assurance, Part 138 compensates by setting out a series of safety risk management processes that require an aerial work operator to manage the risks of their aerial work operations. The requirement to manage risk is fundamental to Part 138 and is achieved both directly within the legislation, for example, by specifying particular performance requirements for carriage of aerial work passengers at night, and by requiring an operator to conduct a risk assessment specific to their operations together with implementing procedures to mitigate the identified risks. These steps are designed to ensure that the operation is within the operator's capabilities and that it can be carried out safely.

2.4.4 Under this legislative scheme, if aerial work is not being conducted during the flight, the disapplication of the Part 91 rules does not apply and the pilot needs to comply with the Part 91 requirements. For example, a ferry flight would need to comply with Part 91 requirements irrespective of whether the aircraft operator is the holder of an aerial work certificate.

2.5 Change management

2.5.1 Under Part 138, an operator is now able to conduct many activities within a specific kind of aerial work operation (note the previous explanation of the 3 kinds of core aerial work operations) without prior approval by CASA.

2.5.2 Certain activities significantly alter the risk profile of an operator's operations and these kinds of changes to or addition of activities, along with certain administrative changes fundamental to the authorisation of an operator, constitute significant changes. If the change is a significant change, then CASA pre-approval would be required, but not necessarily require an adjustment to the aerial work certificate itself.

2.5.3 Where the change is not significant, the operator can add the relevant new procedures to their manuals and commence the new activity. In accordance with the process in their manual for notifying CASA of non-significant changes, the operator would notify CASA of the changes to the operations manual and the additions would be subject to CASA's normal surveillance processes.

Example 1

An operator holds an aerial work certificate authorising external load operations and their operations manual states they are only conducting class A external load operations.

The operator could commence conducting class B external load operations without needing to notify CASA or obtain a specific approval. Instead they follow their change management process to ensure their operations manual contains the requisite plans, processes, procedures and systems to safely

[4] Refer to CASA's webpage Part 91 - General operating and flight rules | Civil Aviation Safety Authority (casa.gov.au) for more detail on Part 91.

manage the new activity, including, if necessary, appropriate training and checking of their personnel in relation to the new activity.

The operator could not commence conducting class C or E external load operations without obtaining approval as section 15.09 of the Part 138 MOS requires a specific approval to be held for such operations.

The operator could not commence conducting Class D external load operations without obtaining an approval because the first time an operator desires to conduct such operations is defined as a significant change (see regulations 138.012, 138.062 and 138.064 of CASR).

Example 2

An operator holds an aerial work certificate authorising task specialist operations and desires to conduct fireground personnel carriage operations.

As fireground personnel carriage operations are a separate kind of aerial work operation, adding this new kind of aerial work operation to their Part 138 aerial work certificate is a significant change which requires an application to CASA and receipt from CASA of a significant change approval.

Example 3

An operator holds an aerial work certificate authorising task specialist operations.

Although no change is required to their Part 138 aerial work certificate to start doing a new type of task specialist operation activity, the operator needs to follow their change management process to determine if their desired change is, or is not, a significant change that requires an application to CASA and receipt of a significant change approval before conducting the new activity.

2.5.4 Further information is available in Multi-Part AC 119-07 and 138-03 - Management of change for air transport and aerial work operators.

2.6 Part 138 transitional arrangements

2.6.1 Part 138 of CASR, together with its MOS, commenced on 2 December 2021 and replaced numerous rules and instruments.

2.6.2 The only remaining deferred item is compliance for some aerial work certificate holders with the Part 138 Safety Manager (SM) and the safety management system (SMS) rules. See Chapter 5 of this AC for more information.

2.6.3 For further detail on transitional arrangements for all the new flight operations regulations introduced on 2 December 2021, refer to AC 1-03 - Transitioning to the flight operations regulations and the general exemption instrument CASA EX73/24.

3 Explanation of key Part 138 rule topics

3.1 Risk management

3.1.1 Regulation 138.370 requires an operator to conduct a risk assessment as outlined in the Part 138 MOS. Chapter 13 of the Part 138 MOS provides details regarding the:

- risk criteria that an aerial work operator must meet to conduct an aerial work operation
- risk assessment and mitigation processes which must be undertaken by the operator
- matters need to be considered when assessing the risks against the risk criteria
- processes pilots and operators need to follow when managing risk
- risk assessment and related requirements for preparation of an aerial work zone risk assessment (AWZ-RA).

3.1.2 Chapter 13 of the Part 138 MOS applies to all Part 138 operations. Specific sections of the chapter apply to all operators - whether they are limited aerial work operators or aerial work certificate holders. The provisions of the chapter are designed to recognise the differences in organisational structure, process and procedure between limited aerial work operators and aerial work certificate holders without reducing the safety benefits of the operational risk assessment requirements specified.

3.1.3 To assist with understanding with risk and the risk assessment process AC 138-05 - Aerial work risk management planning provides further detail.

3.2 Aerial work zone

3.2.1 (Aerial work zones) AWZ are only relevant to a specific subset of the flights over populous areas or public gatherings. Refer to section 1.05 of the Part 138 MOS for the full definition of an AWZ,

3.2.2 Generally, an AWZ is an area of land or water beneath the flight path of the aircraft and the aerial work operation, where the aircraft is flown below the Part 91 minimum height required for a populous area or public gathering where one of the circumstances for such low flying listed in regulation 91.265 of CASR is not met, and there is risk to people or property not associated with the operation[5].

3.2.3 Under the Part 138 rules, the Part 91 minimum height rules for populous areas or public gathering can be switched off if aerial work operations are conducted in an AWZ with appropriate risk controls.

3.3 Aerial work zone risk assessment (AWZ-RA)

3.3.1 There are special risk assessment requirements for operations in AWZ. These requirements are contained in section 13.09 of the Part 138 MOS.

3.3.2 Section 13.09 outlines that, **except for ESO's and fireground personnel carriage operations that comply with the certain conditions in the section**, all operators operating in an area that meets the definition of an AWZ must prepare and document an AWZ-RA and, in certain circumstances, obtain CASA pre-approval of the AWZ-RA before conducting the operation.

[5] Refer to section 1.05 of the Part 138 MOS, for the full definition.

3.3.3 For operators required to prepare and document an AWZ-RA, even if it does not require CASA's pre-approval, the AWZ-RA must be kept by the operator for at least 3 years after the operation.

3.3.4 There are specific extra requirements listed in the MOS for an AWZ-RA for a class B external load operation.

3.3.5 To assist with understanding the risk assessment process for an AWZ-RA, AC 138-05 Annex C - Sample risk assessment process - aerial work certificate holder operating in an aerial work zone (AWZ) provides further detail.

3.4 Persons permitted onboard during aerial work operations and other flights under Part 138

3.4.1 Two categories of persons may be on board a flight which is an aerial work operation[6], including the new fireground personnel carriage operations:

- crew members[7] (defined in the CASR dictionary and includes flight crew members, air crew members, task specialists and others)
- passengers that meet the requirements to be an aerial work passenger.

3.4.2 A positioning flight for an aerial work operation is:

a. a flight of an aircraft to position aerial work cargo, or an aerial work passenger, in order to prepare for and carry out an aerial work operation; and

b. a flight to reposition or remove aerial work cargo or an aerial work passenger on completion or cancellation of an aerial work operation, or of that part of the operation, to which a positioning flight related.

Note: Positioning flights cannot be conducted during a fireground personnel carriage operation: see section 17A.03 of the Part 138 MOS.

3.4.3 Crew members

3.4.3.1 A **flight crew member** is defined in the CASR dictionary and includes crew members who perform any duty essential to the operation of an aircraft during flight. Examples of a flight crew member include a pilot or a flight engineer.

3.4.3.2 An **air crew member** is defined in the CASR dictionary and includes crew members who carry out a function during the flight relating to the safety of the aircraft. Examples of air crew members include a loadmaster and a winch operator. Air crew members, due to their safety-related role, require more wide-ranging training and assessment than a task specialist.

3.4.3.3 A **task specialist** is defined in the CASR dictionary and includes crew members who carry out a function for the flight relating to the aerial work operation (as distinct from a safety related role). Task specialists require training to be inducted into the operator's aerial work operations and to ensure they are competent in carrying out their assigned function as a member of the operator's crew.

6 Certain positioning flights are also considered to be aerial work operations.

7 For a full definition Refer to Flight Operations Regulations - Consolidated Dictionary Part 1.

Examples of a task specialist

A camera operator that operates an external camera pod or an aerial shooter used in an animal culling operation.

3.4.3.4 Section 3.02 of the Part 138 MOS describes the kinds of flight crew members and air crew members who are, for the purposes of the aerial work operation, also task specialists. This allows these persons to perform a dual role in the aircraft for the aerial work operation. For example, a mustering pilot whilst being the flight crew member (pilot) for the flight is also for the purposes of the task specialist operation being carried out (mustering) the task specialist for the flight as well.

3.4.4 Aerial work passengers

3.4.4.1 CASA reminds operators and pilots that the carriage of an aerial work passenger is not an aerial work operation in and of itself. For a person to be carried as an aerial work passenger, an actual aerial work operation must be performed.

3.4.4.2 Any passenger carried during an aerial work operation must meet the definition of an aerial work passenger[8].

3.4.4.3 Only aerial work certificate holders are permitted to carry aerial work passengers[9].

3.4.4.4 Operators must consider the specific circumstances of the way aerial work passengers will be carried and include appropriate procedures in the operations manual to address these matters[10].

3.4.4.5 Appendix A to this AC includes some suggested operations manual content for some of the less complex examples of aerial work passenger carriage as described above.

3.4.4.6 An *aerial work passenger* is defined in section 2.02 of the Part 138 MOS. In general, these are persons who are closely associated with the purpose of the aerial work operation.

3.4.4.7 Section 2.02 contains 2 elements:

- The first element under paragraph 2.02(a) is a general element, whereby a person can be an aerial work passenger if they are present for a purpose, other than mere convenience or enjoyment, that is reasonably and closely associated with the purpose of the operator's aerial work operations and certain operations manual content requirements are met.

Examples of paragraph 2.02(a) persons

Personnel involved in carrying out or supporting a mustering activity carried on a positioning flight before or after the mustering operation, such as ground based personnel to assist with refuelling or for opening and closing of gates etc. and yarding of stock for the mustering operation.

Persons employed by or working under an arrangement with the pastoral company or property owner carried on a positioning flight before or after the mustering operation, such as the manager of the property to be mustered being carried to assist in hazard identification and identification of the property boundaries.

The second of two marine pilots being carried on the same rotorcraft to two ships for marine pilotage duties. In this case both marine pilots are aerial work passengers for the marine pilot transfer (MPT)

[8] See subparagraph 138.305(2)(c)(i) of CASR.

[9] See subparagraph 138.305(2)(c)(ii) of CASR.

[10] See subparagraph 138.305(2)(c)(iii) of CASR.

task specialist operation. The first operation carrying two aerial work passengers from the MPT base to the ship 1, and the second flight one aerial work passenger from ship 1 to ship 2.

- The second element under paragraph 2.02(b) specifies the following named classes of persons who are prescribed as aerial work passengers:
  - persons rescued as part of search and rescue operations
  - restricted persons if the flights are conducted as part of an ESO
  - emergency service operation personnel if the flights are conducted as part of an ESO
  - marine pilots, when being transferred to or from ships requiring the services of a marine pilot
  - persons carried in a fireground personnel carriage operation.

Examples of paragraph 2.02(b) persons

Ground based firefighters carried on a positioning flight from a fire base of operations to a clearing to assist with the external load operations of equipment into the clearing, and then to carry out firefighting operations.

The carriage of firefighters from a fire helibase to a position to be winched into a place on the ground to take part in active firefighting operations, and the retrieval of the firefighters from in the same circumstances.

The carriage of firefighters from a fire helibase to a fireground to conduct ground based firefighting activities at the fireground.

A person who was apprehended by police officers, who were carried as either task specialists or aerial work passengers on a police support, task specialist and external load operation, where the apprehending officers were flown in at low level and then hover exited from a rotorcraft in the vicinity of the person. The person then becomes a restricted person and is carried on a positioning flight to a ground base of operations, so the person can then be carried by police ground transport.

Note: The carriage of the restricted person from the ground base of operations to a city police station would not be a further positioning flight and would be an air transport operation or private operation (depending on whether the flights are conducted for hire or reward - see the Part 119 AMC/GM document for further guidance - unless a further aerial work operation was also to be carried out).

3.4.4.8 In most circumstances aerial work passengers do not require training before their carriage on an aerial work operation or a positioning flight, but they will always (except for some notable situations, such as a person being rescued) require a safety briefing prior to the flight.

Examples of situations where additional training will be needed

Situations that will likely necessitate extra training for an aerial work passenger include:

- hover exit or entry of a rotorcraft
- an aerial work passenger (who is not a person being rescued) is winched into or out of a place as a class D external load

- an aerial work passenger is expected to manage doors and hatches during normal operations (the use of emergency exits is a safety briefing requirement under the Part 91 passenger safety briefing rules which still apply to aerial work operations).

3.5 Rotorcraft performance

3.5.1 In some circumstances, the Part 138 rules require a rotorcraft to have *OEI accountability* (one-engine inoperative accountability) to mitigate the risk of an aerial work operation, such as flights below the minimum height over a populous area, or operations at a fire helibase when it is a populous area.

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

- operating in accordance with a performance class of Performance Class 3 (PC3) as defined by the Part 133 MOS

  or

- operating by day in visual meteorological conditions (VMC) in accordance with the requirements of the rotorcraft's aircraft flight manual (AFM) and with the capability to:

  i. remain clear of obstacles

  ii. reach a suitable forced landing area

  iii. conduct a forced landing into the area without causing a hazard to persons or property on the ground in the area

  or

- operating at night in VMC using night vision imaging systems (NVIS) and able to comply with the requirements mentioned in paragraph (b) as if they applied.

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

a. operating in accordance with a performance class of Performance Class 2 with exposure (PC2WE) or higher performance class as described in the Part 133 MOS

   or

b. during the take-off, take-off and initial climb, en route, and approach and landing and baulked landing, phases of a flight, as applicable, doing all of the following:

   i. operating in accordance with the requirements of the rotorcraft's AFM Category A performance supplement

   ii. remaining clear of obstacles

   iii. using en route performance to fly to a suitable OEI landing area at or above the minimum height for the flight.

   or

c. operating OEI with the capability to do all of the following:

   i. remain clear of obstacles

   ii. reach a suitable forced landing area

   iii. conduct a landing using the power available in the remaining engine within its operating limits.

3.6 Classes of external load

3.6.1 The Part 138 MOS defines five classes of external load operations that group together similar types of external loads.

Class A

3.6.2 A Class A external load:

- is not a person
- is external to the rotorcraft
- is not carried in an approved cargo rack or a sealed receptacle
- is not jettisonable
- cannot move freely
- does not extend below the landing gear.

3.6.3 An example of a Class A load would be a load carried on an external fixed platform from which the load has the potential to fall off if not properly secured, such as equipment carried for powerline maintenance operations.

Class B

3.6.4 A Class B external load:

- is not a person
- is external to the rotorcraft
- is jettisonable
- may extend below the landing gear
- carried on the rotorcraft's belly hook or winch
- is lifted off the surface and carried in flight.

3.6.5 An example of a Class B external load would be building supplies carried on a cargo net at the end of a strop attached to the belly hook of the rotorcraft.

Class C

3.6.6 A Class C external load:

- is not a person
- is external to the rotorcraft
- is jettisonable
- remains in contact with the surface.

3.6.7 An example of a Class C external load would be a powerline that is pulled off a reel and over power poles.

Class D

3.6.8 A Class D external load is:

- a person
- carried external to the aircraft

- carried by a rotorcraft.

3.6.9 An example of a Class D external load would be positioning a person on or at a transmission wire using a fixed line attached to the rotorcraft's belly hook or winching a person on board from land or water.

Class E

3.6.10 A Class E external load is:

- carried by an aeroplane
- an external load operation
- jettisonable
- picked up and towed.

3.6.11 An example of a Class E external load would be banner towing operation by an aeroplane.

3.6.12 Chapter 15 of the Part 138 MOS outlines the rules for conducting external load operations.

3.7 Fireground personnel carriage operations

3.7.1 General description

3.7.1.1 In July 2025, a new kind of aerial work operation was added to the Part 138 rules. This new operation is called a *fireground personnel carriage operation*.

IMPORTANT

The aircraft certification requirements specified in regulation 138.205 of CASR for the carriage of aerial work passengers have not changed.

Aerial work passengers, including passengers carried during a fireground personnel carriage operation, are not permitted to be carried in a restricted or utility category aircraft.

Aerial work passengers can only be carried using an aircraft type certificated in the normal, commuter or transport category.

Additional guidance is available in the GM 138.205 entry of the Part 138 AMC/GM document.

3.7.1.2 This operation can only be conducted by an aerial work certificate (AWC) holder, and any existing AWC holder desiring to conduct these operations must apply to CASA for a significant change to their operations, being the addition of this new kind of operation[11].

3.7.1.3 An AWC holder would apply to CASA to add this new kind of operation to their AWC using the Application - Aerial Work Operations (CASR Part 138) form. The applicant will also need to:

- nominate new key personnel, such as a Head of Training and Checking (HOTC) and Safety Manager (SM) (unless an exception relating to the SM applies - see Chapter 5 of this AC)
- provide the relevant required documentation, such as changes to their operations manual; changes to, or a new, training and checking manual; and changes to, or a new, safety management system (SMS) manual (unless an exception applies - see Chapter 5 of this AC).

[11] Refer to subparagraph 138.012(1)(a)(vi) of CASR that defines changing the kinds of aerial work operations conducted under an AWC to be a significant change.

3.7.1.4 Appendix B to this AC outlines some suggested guidance material on the suggested operations manual content for fireground personnel carriage operations.

3.7.1.5 If an operation is carrying passengers for hire or reward and it does not meet the mandatory characteristics of a fireground personnel carriage operation, then unless the operation meets one of the exclusions within the definition of passenger transport operation, it will likely be an air transport operation and require the operator to hold an Australian air transport AOC under Part 119 of CASR.[12]

3.7.1.6 Fireground personnel carriage operations have the following mandatory characteristics:

- they must be conducted by an aerial work certificate holder
- they must be carrying a passenger who meets the definition of an aerial work passenger for hire or reward[13]
- they must be tasked by a fireground emergency organisation (this is a defined term and only relates to certain emergency organisations)
- they must only be conducted using a helicopter (aeroplanes are not included in this kind of operation)
- the operation can only carry aerial work passengers from a fire *helibase* (this is a defined term) in the vicinity of a *relevant fireground* (this is a defined term) to the fireground; or from one part of a relevant fireground to another part of the fireground, to carry out a *relevant ground activity* (this is a defined term); and then from a relevant fireground to a fire helibase in the vicinity of the fireground, after carrying out a relevant ground activity
- the AWC holder must have a HOTC and a training and checking system for the personnel and aircraft being used for the operation
- unless the CASA EX73/24 SM and SMS exception applies (refer to Chapter 5 of this AC), the AWC holder must have an SM and SMS, and the SMS must encompass all the operator's aerial work operations
- the operator and PIC (as appropriate) must ensure that the requirements of Chapter 17A of the Part 138 MOS are met.

3.7.2 The scope, both operationally and geographically, of which operations can be fireground personnel carriage operations, is deliberately limited to control the level of risk exposure for the passengers being carried.

3.7.3 A key element of fireground personnel carriage operations is the requirement for prospective passengers to be aware of, and consent to, the increased risks of fireground personnel carriage operations compared to Part 133 operations. See section 3.7.2 of this AC.

[12] See the Part 119 AMC/GM document for more information on which passenger transport operations and air transport operations conducted for hire or reward are required to hold an Australian air transport AOC.

[13] Refer to the GM 119.010 entry in the Part 119 AMC/GM document for a description of what constitutes 'hire or reward'.

Example of circumstances NOT included in a fireground personnel carriage operation

A flight carrying passengers for hire or reward from one relevant fireground to a different relevant fireground is NOT a fireground personnel carriage operation—this is a Part 133 operation.

A flight carrying passengers for hire or reward where the activity does not meet the definition of relevant ground activity, such as flights carrying media personnel or government personnel for the purpose of observing the extent of the ground fire and affected areas from the air.

A flight carrying aerial work passengers for hire or reward where the operational purpose is to conduct fire mapping, fireground control or surveillance - this is a Part 138 task specialist operation.

3.7.4 Aerial work passenger pre-flight risk awareness

3.7.4.1 The responsibility for informing prospective passengers of the relative risks and obtaining voluntary consent to be carried on these operations from each individual passenger, at least once every 12 months, rests with fireground emergency organisations.

3.7.4.2 In relation to the risk briefings and consent obtainment, the responsibility of the AWC holder conducting the operation is to verify that these matters have been conducted, by obtaining written notification from the relevant fireground emergency organisation in relation to each passenger.

3.7.4.3 Each passenger carried must have:

- acknowledged, in writing, that they have been informed of the increased risks of a fireground personnel carriage operation, as compared to a Part 133 operation, in sufficient time before the flight, to enable them to have appropriately considered their decision to give consent to being carried
- acknowledged, in writing, their understanding that their participation in fireground personnel carriage operations in general, or a particular fireground personnel carriage operation, is voluntary, and that this understanding was reached in sufficient time before the flight, to enable them to have appropriately considered their decision to consent to being carried
- consented, in writing, to participate in fireground personnel carriage operations in general, or a particular fireground personnel carriage operation, unless and until they withdraw their consent in writing
- given these acknowledgements no earlier than 12 months before the day of the flight
- received copies of their written acknowledgements and consent.

3.7.4.4 The operator of the fireground personnel carriage operation must verify, for each passenger and each flight, by receiving written notification from the relevant fireground emergency organisation, that each of these passenger requirements has been met.

3.7.4.5 This arrangement of awareness, training and consent sets up a specific requirement for the fireground emergency organisation to have an initial and recurrent process to ensure their personnel are made aware of these risks and are trained as necessary to be able to be carried on these flights.

3.7.4.6 Fireground emergency organisations are strongly recommended to consider how to ensure that a passenger has sufficient time, and can appropriately consider, their understanding of these matters. For example:

- What if the passenger is a non-native English speaker during situations where foreign firefighters are deployed to Australia?
- How much information are you delivering to the prospective passengers?

- What are the environmental conditions in which the information is being delivered? Is it too noisy or distracting?
- Is the information being delivered in a rushed manner?
- What if the prospective passenger is added to a flight at late notice and they are not a person who participated in during the emergency organisation's annual training sessions?
- What if the prospective passenger is not a person covered by the defined fireground emergency organisation annual training sessions, such as a police constable that needs to be transported to a roadblock site?

3.7.4.7 Appendix C to this AC includes some suggested content for fireground emergency organisation risk awareness briefing and operational training requirements.

RECOMMENDED PRACTICE

AWC holders conducting fireground personnel carriage operations, and fireground emergency organisations intending to have their personnel, or personnel allocated to their organisation for fire emergencies, carried on a helicopter operating to these new rules, instead of being carried under the Part 133 air transport rules, are **strongly recommended** to meet and ensure they have a common understanding of how these new rules will be applied in practice.

An enhanced passenger list, containing the names of each passenger and the confirmation for each passenger that the passenger has met each requirement within subsection 17A.02(2) of the Part 138 MOS, should be developed for each flight by the relevant fireground emergency organisation that tasks the flight.

This enhanced passenger list would enable the AWC holder to satisfy their verification obligation in subsection 17A.02(3) of the Part 138 MOS.

3.7.5 What is a fire helibase?

3.7.5.1 A fire helibase for a fireground personnel carriage operation, means a safe area:

- at which passengers, who are carried in a helicopter for the operation, assemble, to embark on a helicopter at the start of the operation

  or

- to which passengers, who are carried in a helicopter for the operation, are returned, to disembark on completion of the operation.

3.7.5.2 A fire helibase is not normally a staging area where longer range flights pre-position ground personnel which are then moved to another location before conducting their specific role for the ground firefighting operation.

3.7.5.3 Fire helibases do include both the 'established for the duration of the fire emergency' embarkation location, or locations, for persons to board helicopters, and the ad-hoc locations at which persons are dropped off, or picked up from, in and around the vicinity of the fireground.

3.7.6 Operational limitations

3.7.6.1 The operator must ensure that during a flight which is a fireground personnel carriage operation:

- the helicopter used for a flight, when operated in or over a populous area for the flight, **is operated with OEI accountability** (see section 3.5 of this AC)
- positioning flights, dispensing operations, external load operations, and task specialist operations (other than aerial spotting or aerial photography [which includes aerial filming and aerial surveillance]), **are NOT** conducted simultaneously with the flight.

3.7.6.2 Operators are reminded that a fire helibase, due to the number of personnel present during operations, can become a populous area. The reason for requiring operators to operate with OEI accountability for their operations at such fire helibases is to reduce third party risk to personnel.

Note: Guidance from CASA on the kinds of areas that can become populous areas is contained in the GM 91.265 entry within the Part 91 AMC/GM document.

3.7.6.3 The reason for not permitting certain other operations to be simultaneously conducted with a fireground personnel carriage operation is to ensure the aerial work passengers normally carried on a fireground personnel carriage operation are not exposed to unnecessary risks.

3.7.6.4 Where a fireground personnel carriage operation is conducted over a populous area, operators are reminded to check whether the area meets the definition of an aerial work zone (AWZ) in section 1.05 of the Part 138 MOS. If the area is an AWZ, then section 13.09 of the Part 138 MOS enables the operator to NOT prepare and develop an aerial work zone risk assessment (AWZ-RA), provided the conditions specified in subsection 13.09(4) of the Part 138 MOS are met.

3.7.6.5 Normal aerial work risk assessment requirements do still apply to fireground personnel carriage operations.

3.7.6.6 To assist with understanding with the risk assessment process for an AWZ-RA, AC 138-05 Annex C - Sample risk assessment process - aerial work certificate holder operating in an aerial work zone (AWZ) provides further detail.

4 Training and checking

4.1 Overview of requirements

Notes:

1. The circumstances (activities) that require an operator to have a formal training and checking system in Part 138 are different to those previously required by regulation 217 of CAR prior to 2 December 2021. Although some operators were temporarily excluded from needing to comply with the new Part 138 training and checking requirements, this exclusion has now ended.
2. Readers are reminded that the defined phrase *aerial work operator* means an operator required to hold an aerial work certificate, and that the phrase *limited aerial work operator* is referring to an operator conducting aerial work operations that is not required to hold an aerial work certificate.
3. Under subregulation 138.550(2) of the CASR, the training or checking of an air crew member must be done by an individual who meets the requirements of Chapter 24 of the Part 138 MOS. Through the combined effect of paragraph 138.125(1)(c) of the CASR, paragraph 4.02(1)(c) of the Part 138 MOS, and subsections 4.03(7) and 4.04(7) of the Part 138 MOS, certain operators, who are, in effect, aerial work certificate holders, must have a formal training and checking system if they are conducting the training or checking of air crew members.
4. For the definition of *operator* refer to the definitions section of this AC or Part 1 of the CASR dictionary.

4.1.1 Part 138 of CASR places training and checking obligations on **ALL** operators conducting aerial work. These obligations are scaled for aircraft and operations of different complexities, with the rules also enabling some operators to voluntarily use a more formal training and checking system if that is useful to them.

4.1.2 The combination of mandatory requirements and voluntary adoption ability means operators will fit in one of the categories listed below. Any aircraft or operation mentioned in the list below solely relates to an aircraft used to conduct an aerial work operation or an operation conducted as an aerial work operation. The categories are:

- an operator not required to hold an aerial work certificate (AWC)
- an AWC holder **not** required to use a formal training and checking system for any of their aircraft and operations, and who does not voluntarily elect to use a formal training and checking system
- an AWC holder **not** required to use a formal training and checking system for any of their aircraft and operations, but who elects to voluntarily use a formal training and checking system for some or all of their aircraft and operations
- an AWC holder **required** to use a formal training and checking system for some of their aircraft or operations, but who is not required to use a formal training and checking system for their other aircraft or operations, and who does not voluntarily extend their required training and checking system to include some or all of these other aircraft or operations
- an AWC holder **required** to use a formal training and checking system for some of their aircraft or operations, but who has other aircraft or operations and decides to voluntarily extend their mandatory system to include some, but not all, of these other aircraft and operations

- an AWC holder **required** to use a formal training and checking system for some of their aircraft or operations, but who has other aircraft or operations and decides to voluntarily extend their mandatory system to include ALL of these other aircraft and operations
- an AWC holder **required** to use a formal training and checking system for all their aircraft and operations.

4.1.3 The relevant training and checking obligations are in the following rules:

- to determine if a formal training and checking system must be used: regulation 138.125 of CASR and section 4.02 of the Part 138 MOS
- if the operator chooses to voluntarily extend their required formal training and checking system to include other aircraft or operations: section 4.03 of the Part 138 MOS
- if the operator chooses to voluntarily use a formal training and checking system when they are not required to: section 4.04 of the Part 138 MOS
- for flight crew members of aircraft and operations under a formal training and checking system: regulation 138.130 of CASR
- for operational safety-critical personnel, who are not flight crew members, for aircraft and operations under a formal training and checking system: regulation 138.135 of CASR
- for all flight crew members, whether under a formal training and checking system or not: Subpart 138.N of CASR (regulations 138.475 through 138.505 inclusive) and Chapter 23 of the Part 138 MOS
- for all air crew members: Division 138.P.1 of CASR (regulations 138.535 through 138.550 inclusive) and Chapter 24 of the Part 138 MOS
- for task specialists, whether under a formal training and checking system or not: Division 138.P.2 of CASR (regulations 138.575 through 138.590 inclusive) and Chapter 25 of the Part 138 MOS.

4.1.4 Limited aerial work operators, in relation to flight crew members, only need to ensure that pilots of Australian registered aircraft in the aerial work operation are authorised under Part 61 of CASR, or under the relevant foreign rules for the pilots of foreign registered aircraft. These operators are recommended to pay particular attention to whether the pilots are compliant with regulation 61.385 of CASR, in addition to holding any required licence, rating and endorsement for a particular activity.

4.2 Which operators are required to have a Part 138 training and checking system?

4.2.1 For detailed guidance on training and checking systems, read Multi-Part AC 119-11 and AC 138-02.

4.2.2 An aerial work operation involving the use of any of the following aircraft, or the conduct of any of the following operations, must have a formal training and checking system:

1. an operation transporting marine pilots
2. multi-engine transport category certified rotorcraft with a maximum take-off weight of more than 3175 kg
3. multi-engine aeroplanes with a maximum take-off weight of more than 5700 kg
4. turbine-engine aeroplanes (other than turbine-engine propeller-driven aeroplanes with a maximum take-off weight of 5700 kg or less)
5. an operation using offshore airborne radar approach procedures in accordance with section 8.6 of the Part 173 MOS

6. an operation using the descent and operational procedures set out in Division 3. 4 or 5 of Chapter 9 or the Part 138 MOS, that is not a task specialist operation for the purposes of frost protection of agricultural crops
7. an operation for the purposes of training and checking air crew members under Chapter 24 of the Part 138 MOS
8. an operation using a multi-engine rotorcraft with a maximum take-off weight above 3175 kg that is type certificated in the restricted category
9. an operation that is an NVIS operation
10. an operation that is a fireground personnel carriage operation.

Note: Items 1 to 4 of the above list are found in regulation 138.125 of CASR. This regulation also allows the Part 138 MOS to require other operations to also have a training and checking system. Items 5 to 10 on the list above are specified in section 4.02 of the Part 138 MOS.

4.3 Voluntary extension of a mandatory training and checking system

4.3.1 An operator who already has a Part 138 training and checking system can voluntarily extend this system to include other aircraft or operations by complying with the requirements of section 4.03 of the Part 138 MOS.

4.3.2 Why would an operator do this?

- It might permit a more effective and efficient use of the functionality and capability of an operator's existing system.
- It might lead to better use of resources within the operator's existing system.
- It might lead to better training outcomes as the relevant personnel are subject to an operator's training and checking system processes and procedures from early in their employment with the operator.
- It would allow the operator to use a wider range of training and checking staff.

4.3.3 As CASA must approve these extensions, the operator must apply for the approval, which is therefore also a significant change for the operator under paragraph 138.012(d) of CASR.

4.3.4 When applying for this approval, the operator must ensure their submission complies with regulations 138.130 and 138.135 of CASR, as well as relevant Part 138 MOS requirements.

4.3.5 For detailed guidance on training and checking systems, read Multi-Part AC 119-11 and AC 138-02.

4.4 Voluntary adoption of a training and checking system

4.4.1 An operator who doesn't have a Part 138 training and checking system can voluntarily adopt such a system for any or all of their aircraft or operations by complying with the requirements of section 4.04 of the Part 138 MOS.

4.4.2 Why would an operator do this?

- It might permit a more effective and efficient use of the functionality and capability of an operator's existing system.
- It might lead to better use of resources within the operator's existing system.

- It might lead to better training outcomes as the relevant personnel are subject to an operator's training and checking system processes and procedures from early in their employment with the operator.
- It would allow the operator to use a wider range of training and checking staff.

4.4.3 As CASA must approve this adoption, the operator must apply for the approval, which is therefore also a significant change for the operator under paragraph 138.012(d) of CASR.

4.4.4 Operators should note that they will also need to nominate a Head of Training and Checking key person, who must meet the relevant requirements of regulations 138.100 and 138.105 of CASR.

4.4.5 When applying for this approval, the operator must ensure their submission complies with regulations 138.130 and 138.135 of CASR, as well as relevant Part 138 MOS requirements.

4.4.6 For detailed guidance on training and checking systems, read Multi-Part AC 119-11 and AC 138-02.

4.5 Training and checking of crew members

4.5.1 Flight crew member training and checking

4.5.1.1 For detailed guidance on this topic, read Multi-Part AC 119-11 and AC 138-02.

4.5.1.2 Flight crew members are defined as pilots or flight engineers. Noting the rarity of flight engineers in aircraft used for aerial work operations in Australia, this guidance is focused on pilots, with the general concepts being also applicable to flight engineers.

4.5.1.3 Flight crew member training and competency are determined via 2 regulatory pathways—the licensing scheme (for Australian registered aircraft this scheme is specified in Part 61 of CASR) and the operator based scheme (outlined in Part 138 of CASR). Often there is overlap between the training sequences and units of competency for these schemes, but this is not always the case.

4.5.1.4 Operators are particularly recommended to review the Part 61 requirements, or the equivalent foreign rules for a foreign-registered aircraft, for their flight crew members. This is because sometimes the Part 61 rule will allow, either with specific approval or automatically without approval, the successful completion of an operator proficiency check to satisfy a relevant Part 61 event.

4.5.1.5 Where automatic recognition is not possible, or not available via specific approval, it is still possible for a single flight to meet both the licensing scheme and the operator scheme requirements, provided the relevant matters for both schemes are covered during the flight, and the person conducting the competency evaluation also meets both sets of requirements.

4.5.1.6 Chapter 23 of the Part 138 MOS specifies that the following flight crew training and checking events must be carried out:

- general emergency training and competency (similar to the CAO 20.11 competencies that existed for charter and RPT operations before 2 December 2021)
- conversion training and proficiency checks
- differences training (if required by Part 61)
- recurrent training and checking
- remedial training and checking.

4.5.1.7 Operators are reminded that, although Division 2 of Chapter 23 of the Part 138 MOS (qualification as pilot in command (PIC)) technically applies to both aerial work certificate holders and limited aerial work operators, the current content is not relevant to limited aerial

work operators because both Class D external load operations and marine pilot transfer operations must be carried out by an aerial work certificate holder.

4.5.1.8 These requirements have only small variations for aerial work certificate holders using a training and checking system and those that are not using such a system. These variations include the:

- time before the next recurrent proficiency check
- level of detail specified in the operator's procedures can vary slightly, as operators not using a training and checking system don't have to comply with regulations 138.130 and 138.135 of CASR, but this is highly dependent on the complexity of the operations being performed by the operator
- kinds of persons who can conduct flight crew training and checking.

4.5.1.9 Although paragraph 23.10(1)(a) of the Part 138 MOS permits an operator's Head of Operations, where the operator is an aerial work certificate holder who is not using a training and checking system for an aircraft or operation, to conduct an in-flight proficiency check, operators are cautioned that the conduct of non-normal exercises (see definition at the beginning of this AC) by persons untrained in the conduct of training and checking in these sequences is subject to significant risk. Operators must set their requirements for these persons to perform a training and checking role in an appropriate manner that maintains aviation safety.

4.5.1.10 For a Part 138 operator that is not required to have a training and checking system, a person can carry out the general emergency training and competency assessment after meeting the operator's training and assessment requirements for the role and being nominated in the operator's operations manual.[14]

4.5.2 Crew other than flight crew training and checking

4.5.2.1 For detailed guidance on this topic, read Multi-Part AC 119-11 and AC 138-02.

4.5.2.2 The crew members other than flight crew members commonly used in aerial work operations, and for which specific requirements exist in the Part 138 MOS, are air crew members and task specialists.

4.5.2.3 For operators required to have a formal training and checking system, the requirements for the system for these persons are contained in regulation 138.135 of CASR and Chapters 24 and 25 of the Part 138 MOS.

4.5.2.4 As outlined in a Note at the beginning of this chapter, the training and checking of air crew members must be conducted by an aerial work certificate holder with a formal training and checking system.

4.5.2.5 Chapter 24 of the Part 138 MOS deliberately matches many of the air crew member training and checking requirements to the requirements for flight crew members, noting the higher safety criticality of these roles.

4.5.2.6 Chapter 25 of the Part 138 MOS provides operators with outcome-based requirements for the training and checking of task specialists.

4.5.2.7 Depending on the complexity of the task specialist's role, their training and the determination of their competency, for a simple operation, might take the form of a pre-flight briefing by the PIC, providing that the operator is satisfied such a briefing can adequately cover the relevant procedures and confirm the task specialist is competent to carry them out.

[14] Subsection 23.10(1)(c) of the Part 138 MOS.

4.6 Training and checking of operational safety-critical personnel other than crew members

4.6.1 For detailed guidance on this topic, read Multi-Part AC 119-11 and AC 138-02.

4.6.2 *Operational safety-critical personnel* is a defined term with a broad scope. The persons encompassed within this definition include all crew members, as well ground staff that have direct contact with the physical operation of the aircraft or have operational contact with the persons operating the aircraft.

4.6.3 For operators required to have a formal training and checking system, the requirements for the system for these persons are contained in regulation 138.135 of CASR.

4.6.4 Depending on the complexity of the task being performed by the person, the method of training the person and determining their competency could be done by a briefing being delivered by an appropriate person, followed by appropriate questioning to ascertain the person's recollection and understanding of the briefing. As always, the operator needs to be satisfied that the training and competency determination adequately covers the relevant procedures and confirms the person is competent to carry them out.

5 Safety management systems (SMS)

5.1 Part 138 SMS requirements

5.1.1 Regulation 138.140 of CASR, which extends to section 5.02 of the Part 138 MOS, requires aerial work certificate holders who conduct one or more of the following operations, or use one of the following aircraft, to have a safety management system (SMS) that covers **ALL** their aerial work operations:

- an operation transporting marine pilots
- multi-engine transport category rotorcraft with a MTOW of more than 3,17 kg
- multi-engine aeroplanes with a MTOW of more than 5,700 kg
- an aeroplane powered by a turbofan or turbojet engines
- an operation that is a fireground personnel carriage operation.

5.1.2 An aerial work operator's mandatory SMS must meet the requirements outlined in regulation 138.145 of CASR.

5.1.3 Further information on the development of an operator's SMS can be found on the CASA website.

5.2 Temporary SMS exclusions for some operators

5.2.1 Operators required to have an aerial work SMS for reasons other than conducting a fireground personnel carriage operations are temporarily excluded from compliance with the Part 138 Safety Manager (SM) and SMS requirements if[15]:

- the operator held an aerial work AOC before 2 December 2021
- the operator has not modified their pre-2 December 2021 aerial work operations to commence any of the listed trigger events in regulation 138.140 of CASR after 2 December 2021.

5.2.2 An operator required to have an aerial work SMS for a fireground personnel carriage operation **is** temporarily excluded from compliance with the Part 138 SM and SMS requirements if[16]:

- immediately before the operator commenced fireground personnel carriage operations, they could conduct such operations under Part 133 and had conducted such operations between 2 December 2021 and their commencement of fireground personnel carriage operations
- they held a charter AOC immediately before 2 December 2021 and had conducted the carriage of passengers within, and in the vicinity of, a fireground in the 2 years immediately before 2 December 2021.

5.2.3 The end date for these temporary exclusions has not yet been set by CASA.

5.2.4 CASA will inform relevant operators of the end date via multiple communications channels.

5.2.5 For more information on these temporary transitional arrangements, refer to AC 1-03 - Transitioning to the flight operations regulations (casa.gov.au).[17]

[15] See the exemption in Part 4 of CASA EX73/24.

[16] See the exemption in Part 4 of CASA EX73/24.

[17] At the time of publishing v2.2 of AC 138-01 (this AC), AC 1-03 had not yet been updated to include the exclusion relating to fireground personnel carriage operations. This update is expected to occur in approximately the middle of July 2025.

Appendix A
Sample operations manual clauses (simple aerial work passengers)

A.1 Sample aerial work passenger listing clauses

A.1.1 Sample clauses for aerial work passengers in relation to mustering operations

A.1.1.1 Example 1

[Sample Operator] aerial work passengers carried in connection to mustering operations are limited to the persons or classes of persons mentioned in the next paragraph.

A.1.1.2 Example 2

[Sample Operator]'s personnel involved in carrying out or supporting a mustering activity including a positioning flight:

- Ground based personnel carried to and moved around the property being mustered to assist with refuelling and coordination of the mustering operation.
- Persons employed by or working under an arrangement with [Sample Operator]'s client:
  - The manager of the property to be mustered to assist in hazard identification and identification of the property boundaries.
  - Moving the client's ground-based personnel to assist with opening and closing of gates and yarding of stock.
- A maintenance engineer.

A.1.1.3 Example 3

[Sample Operator] is not approved for Australian Air Transport operations and the following are examples of people who are not aerial work passengers and cannot be carried by [Sample Operator]:

- Drilling rig operators wanting to be transferred out to the drill rig on crew change days to save time and avoid driving on rough bush tracks.
- Fisherman looking to access a remote part of the property.

A.1.2 Sample clause for aerial work passengers in relation to firebombing operations

A.1.2.1 Example 1

[Sample Operators]'s personnel involved in carrying out or supporting an aerial firebombing and aerial fire surveillance task, including a positioning flight, are limited to the persons mentioned in the list below.

- Ground based personnel carried to and from the firebombing staging area to assist with refuelling and refilling the aircraft with fire retardant.

- Emergency service personnel involved in carrying out or supporting the conduct of firefighting water bombing operations.
- Emergency Service personnel tasked with observing and coordinating the firefighting relief effort.
- Maintenance engineers if carried for the purpose of ensuring the ongoing serviceability of aircraft and ground support equipment directly associated with the firebombing task.

> **Note:** Aerial Work passengers are not permitted to be carried in [Sample Operator]'s aircraft certified in the Restricted Category.

A.2 Sample aerial work passenger briefing clauses

A.2.1 Example 1

The flight is to comply with the minimum height requirements in [section of operations manual] until the aerial work operation commences, and it is operationally necessary to descend below the minimum height providing the risk assessment process in [section of operations manual] has been carried out and the risk remains acceptable.

When an aerial work passenger is carried, they are to be briefed by the pilot before they board the aircraft for the flight on all matters required by Part 91 and the following matters:

- normal entry and egress from the helicopter
- special precautions if the engine is running or rotors are turning
- if harnesses are used instead of seat belts - when they must be worn and how to use them
- if a passenger is permitted to open or close a door in normal operations - instructions on the use of the relevant doors
- how to communicate with the pilot or other crew members, including when during a flight such communications should be limited to safety critical information only
- precautions and limitations in relation to cockpit controls
- if doors off operations will be conducted and any special considerations for securing loose items
- if different or additional to Part 91 passenger briefing requirements - instructions in self-rescue emergency exit techniques as applicable to the rotorcraft type
- that the operation is not conducted to an air transport standard, and that there is an elevated level of risk in the conduct of aerial work operations compared to air transport operations (not required for persons rescued due to the exigent circumstances, and also not required for fireground personnel carriage operations provided the operator has verified each passenger has received the relevant briefing and consented to the carriage).

Appendix B
Fireground personnel carriage operations (operations manual requirements)

B.1 Operations Manual Content Guidance

This guidance is provided to support the introduction of fireground personnel carriage operations as a new kind of aerial work operation.

Due to the requirements of paragraphs 138.155(1)(g) and (h) of CASR, operators choosing to add fireground personnel carriage operations to their AWC must ensure their operations manual contains the plans, processes, procedures and systems necessary to safely conduct and manage these operations.

Operators already carrying aerial work passengers during other kinds of aerial work operations, who choose to add fireground personnel carriage operations to their AWC, need only consider how to vary their existing aerial work passenger procedures for their introduction fireground personnel carriage operations in the new content.

Amongst other MOS operations manual requirements that may be relevant, any operations manual content must meet the requirements of:

- subsection 11.06(2) regarding the carriage of the fireground personnel as aerial work passengers
- section 13.06 regarding pre-operational risk procedures for risk assessment and mitigation processes, flight risk management plans and post flight risk review procedures
- the pre-flight aerial work passenger requirements set out in section 17A.02
- the procedures for record keeping set out in section 17A.04.

Notes:

1. Operators are reminded that although the fireground emergency organisation is the entity responsible for informing prospective aerial work passengers of the increased risks associated with fireground personnel carriage operations compared to Part 133 operations, if the operator proposes to conduct activities with elevated risks compared to normal passenger transport, such as operations within the avoid area of the HV envelope or low flying, then operators will need to inform relevant fireground emergency organisations of this intent so that the relevant risk information session includes appropriate information.

2. If the operator does not inform relevant fireground emergency organisations of this intent so that the relevant risk information session includes appropriate information, then the operator is unlikely to be able to comply with their obligations under subsection 17A.02(1) of the Part 138 MOS.

Depending on the way operators propose to conduct fireground personnel carriage operations, operators must include operations manual content relating to the following matters, **when they are permitted or required to be carried out during their operations:**

- additional procedures for OEI accountability for operations at fire helibases when they are populous areas

  Note: A fire helibase could be a populous area, operators are recommended to read the guidance published by CASA in AC 138-01 section 3.5.

- policy and procedures for risk mitigation for operations in the avoid area of the HV envelope

- policy, processes and risk assessment procedures for operations below the minimum heights of Part 91 of CASR
- policy and procedures for rotors turning loading and unloading of aerial work passengers in these operations (noting the higher potential for such operations during aerial work operations)
- policy and procedures for combining other low risk aerial work operations (such as fire spotting) with a fireground personnel carriage operation.

CASA also recommends operations manual content is included for:

- policy and procedures for pilot determinations of go/no-go decisions for fireground personnel carriage operations
- policy and procedures for avoidance of operations in degraded visibility environments and inadvertent IMC avoidance
- procedures for reversion to a Part 133 operation, if this becomes necessary due to an inability to fully comply with the Part 183 MOS requirements for fireground personnel carriage operations (note that an operator will need to hold an Australian air transport AOC authorising passenger transport operations in the relevant helicopter).

Appendix C
Fireground Emergency Organisation (sample risk awareness briefing and operation training requirements)

C.1 Sample briefing content

C.1.1 Fireground emergency organisations are strongly recommended to liaise with their aviation operators to verify the fireground emergency organisation's understanding of:

- the differences between the minimum regulatory requirements for commercial passenger air transport operations under Part 133 of CASR and fireground personnel carriage aerial work operations
- how the operator's specific processes and procedures either meet the minimum regulatory standards for an operation or exceed the minimum regulatory standards for an operation
- whether an individual operator requires their passengers to undertake any additional items of training before being carried on their aircraft.

C.1.2 This briefing may include, but is not limited to, the content in sections C.1.3 and C.1.4 below.

C.1.3 General content

Notes:

1. These general items should be utilised as necessary and be relevant to your fireground personnel carriage operational policy.
2. As appropriate, adjust the content based on input from your aviation operator.
3. Remember, the aim is to ensure your fireground personnel carriage aerial work passengers are aware of the risks to which they are exposed when carried on flights that are fireground personnel carriage operations for your fire emergency organisation.

- Pilots are subject to mandatory rules regarding the amount of work they can do, and the minimum rest period they must be provided. For a pilot conducting a fireground personnel carriage operation, these limits are more flexible compared to a pilot conducting a commercial passenger transport operation.
- The flight crew for the aerial work flight may have been already engaged in other aerial work activities prior to the fireground personnel carriage operation, and their fatigue level may be affected by these previous operations. When compared to conducting the operation as an air transport operation, after completion of the other aerial work activities, the flight crew would have to meet the higher air transport standard of fatigue management prior to commencing the flight as an air transport flight.
- There are differences in the volume and depth of an aviation operator's maintenance responsibilities depending on the kind of aviation operation being performed. Generally, a commercial passenger transport operation is subject to tighter standards compared to an aerial work operation, even an aerial work operation involving the carriage of passengers.
- The instrument and equipment fit out in the aircraft can be less redundant, particularly for operations involving multiple crew members.

- The additional layer of safety when operating to a helicopter performance code (Performance class 1, class 2, class 2 with exposure or class 3), which is mandatory for air transport operations, may not exist during a fireground personnel carriage operation since compliance with this helicopter performance code is not mandated for aerial work operations.
- The effects of not operating in a performance class can cause, when compared to air transport operations, greater exposure to operations where single point failures such as engine failure can lead to catastrophic outcomes. In this example, operating in the avoid area of height/velocity (HV) envelope when conducting fireground personnel carriage operations is permitted with a greater risk of an adverse outcome in the event of an engine failure. However, in air transport operations, operations in the avoid area of the HV envelope must be minimised and only conducted to avoid an accident or incident.
- A further effect of not operating in a performance class is that the requirement to maximise, to the greatest extent practicable, the availability of suitable forced landing areas for single engine and low performance multi-engine rotorcraft, or to operate higher performance multi-engine rotorcraft with one engine inoperative (OEI) performance which emphasises the potential for a safe outcome following an engine failure, is not mandated for an aerial work operation. This exposes the aerial work passenger on a fireground personnel carriage operation to a higher risk of an adverse outcome from a forced landing triggered by any cause, when compared to an air transport passenger.
- In air transport operations, the implementation of higher safety mitigators which comply with the air transport rotorcraft performance standards are a shared responsibility between the operator and their flight crew. These standards must be procedurally controlled via the operator's manuals and their flight crews must be trained in and be found competent to carry out the required procedures. When compared to air transport operations, aerial work operations do not have this level of shared, procedurally controlled, performance safety mitigation, a situation which tends to place the risk mitigations for take-off, enroute and landing operations more directly on the pilot in command of the helicopter.
- The preflight knowledge of acceptable aerodrome facility and suitability standards are not as robust for aerial work operations when compared to the knowledge requirements for air transport operations. This may lead to the need for more airborne reconnaissance of landing sites at low level over unfavourable terrain for aerial work operations to achieve an acceptable level of safety. This type of reconnaissance can lead to increased risk and exposure to unfavourable outcomes if a forced landing becomes necessary.
- Visual flight rule (VFR) passenger operations at night for 2 or less aerial work passengers on fireground personnel carriage operations can be conducted in single engine rotorcraft in aerial work operations. Air transport operations require all night passenger transport operations to be in multi-engine rotorcraft operated to at least performance class 2 with exposure or higher performance class. This increases the risk and exposure for aerial work passengers to engine failure or other single point system failure, particularly in the enroute stage of the flight.
- VFR night aerial work passenger operations do not require a fully instrument rated pilot capable of flying in cloud and very poor visibility conditions. This difference in pilot minimum standards increases the risk of a negative outcome in the event of an inadvertent encounter with instrument meteorological conditions (IIMC) in or around the smoky environment of a fireground.
- A fireground personnel carriage operation, conducted as an aerial work operation, is permitted to have less fuel on board for the same flight than if it was conducted as an air transport operation. This is due to the flight not being required to carry contingency fuel, which is mandatory for air transport operations. Contingency fuel, for a rotorcraft and flight, means the amount of fuel required to compensate for unforeseen factors, which must not be less than the greater of the following amounts, 10% of the trip fuel amount for the flight, or an amount of fuel required to fly, in internationally standard atmospheric conditions, for 5 minutes at the holding speed, at 1,500 ft above the planned destination aerodrome. Aerial work operations are not required to carry contingency fuel. This increases the aerial work passenger exposure to the risk of fuel starvation, however contingency fuel is, for helicopter operations, usually a small overall quality of fuel, particularly on short operations such as fireground personnel carriage operations. Hence the risk can be considered relatively low if the rotorcraft's PIC manages their fuel loads well.

- However, there is some contingent additional fuel starvation risk which must be considered for fireground personnel carriage operations due to the potential short and repetitive nature of the flights. This relates to the total fuel onboard being itself a relatively small amount of fuel required for the flight, with a small, fixed reserve of only 20 minutes of reserve fuel, potentially nil or optional alternate aerodrome fuel requirements and the desire to maximise payload on the flights. The combination of these factors and the lack of contingency fuel and the potential continuous operational requirements of fire emergency situations, can lead to a higher fuel starvation risk due to task distraction and small initial fuel load. While this is something that should be managed by the operator's risk assessment for the operations, this scenario is less like to occur in air transport operations and aerial work passengers on fireground personnel carriage operations should be made aware of this risk.

C.1.4 Specific operator informed content

This content is required to be established via consultation with the Part 138 aerial work certificate (AWC) holders who conduct your fireground personnel carriage operations.

- Operations below the minimum height:
  - Aerial work operations under Part 138 of CASR are permitted, subject to compliance with the relevant Part 138 MOS requirements, to operate below the minimum heights and within the minimum distances of Part 91 of CASR.
  - Section 9.03 of the Part 138 MOS is particularly relevant to fireground personnel carriage operations, as this section applies to the requirements for aircraft flight in close proximity to an object in an area that is not a populous area or a public gathering.
  - This section permits low level flight in close proximity to objects, unoccupied and occupied buildings and other things for flights associated with day VFR operations and it does not prohibit the carriage of aerial work passengers on such flights.
  - If fireground personnel are carried on flights which are conducted at low level, within the minimum distances outlined in Part 91 of CASR, they will be potentially exposed to higher risk of an accident or incident that an operation which is compliant with the Part 91 requirements.
  - These additional risks include:
    - » collision with terrain
    - » collision with objects such as wires, trees, towers, buildings
    - » enhanced IIMC risk due to ground proximity reducing avoidance options
    - » reduced forced landing time, leading to negative outcome of forced landing attempt
    - » higher potential for operations in the avoid area of the HV envelope
    - » negative outcome from engine failure inflight due to operations in the avoid area of the HV envelope
    - » sun and glare interference with inflight visibility.
- Fireground personnel aerial work passenger aircraft escape knowledge and self-rescue capability:
  - In some circumstances it may be necessary for your fireground personnel to self-rescue from a rotorcraft involved in an accident during a fireground personnel carriage operation. This could be required due to pilot / other crew member incapacity due injury etc.
  - Your personnel will need to knowledge and skill sets to achieve this outcome in the type of helicopter they are being carried.
  - While this situation is similar in risk to air transport operations, the characteristics of fireground personnel carriage operations may increase the likelihood of the of the necessity to carry out a self-rescue exit of the helicopter, as such overall the risk is increased and therefore it should be included in your personnel briefings and training, which should be based on your operator's procedures and rotorcraft types operated.

- Rotors turning loading and unloading of aerial work passengers in these operations:
  - Unless prevented by policy or procedural means, fireground personnel carriage operations may include normalised supervised or unsupervised passenger unloading and loading activities.
  - These operations will increase the risk of the activity compared to an air transport operation, which normally do not conduct rotors turning loading or unloading, and if it is conducted are required to do so normally with operator ground personnel supervision over the entire period the passenger is exposed to the loading area, rotor disc area, aircraft entry and exit and seat entry and seat belt fitment and release.
  - Therefore, it should be included in your personnel briefings and training, which should be based on your operator's procedures and rotorcraft types operated.