



Australian Government

AVIY4055 Conduct airborne extraction operations

Release: 1

AVIY4055 Conduct airborne extraction operations

Modification History

Release 1. This is the first release of this unit of competency in the AVI Aviation Training Package.

Application

This unit involves the skills and knowledge required to conduct airborne extraction operations, in compliance with relevant regulatory requirements of the Civil Aviation Safety Authority and national operating standards.

It includes preparing helicopter and personnel for airborne extraction, **performing airborne extraction operations**, and responding to airborne extraction emergencies and abnormal situations.

This unit addresses aviation technical skill requirements (physical, mental and task-management abilities) related to aircraft operational duties of flight crew, and contributes to safe and effective performance in complex aviation operational environments.

Operations are conducted as part of recreational, commercial and military aircraft activities across a variety of operational contexts within the Australian aviation industry.

Work is performed independently or under limited supervision within a single-pilot or multi-crew environment.

Licensing, legislative, regulatory or certification requirements are applicable to this unit.

Use for Defence Aviation is to be in accordance with relevant Defence Orders, Instructions, Publications and Regulations.

Pre-requisite Unit

Not applicable.

Competency Field

Y – Aircraft Operation and Traffic Management

Unit Sector

Not applicable.

Elements and Performance Criteria

ELEMENTS

Elements describe the essential outcomes.

PERFORMANCE CRITERIA

Performance criteria describe the performance needed to demonstrate achievement of the element.

1 Prepare helicopter and personnel for airborne extraction

- 1.1 Helicopter and airborne extraction equipment are checked to determine serviceability
- 1.2 Extraction zone characteristics and dimensions are determined and calculated
- 1.3 Extraction personnel characteristics are considered in scope of mission planning
- 1.4 Crew is briefed during mission brief
- 1.5 Airborne extraction supervisor is briefed
- 1.6 Static ground rehearsals are conducted with personnel and equipment

2 Prepare for airborne extraction

- 2.1 Extraction equipment is attached and checked for security
- 2.2 Helicopter safety hazards are communicated using workplace procedures
- 2.3 Extraction checks are conducted prior to extraction equipment deployment
- 2.4 Wind speed and direction are communicated
- 2.5 Approach and overshoot paths are communicated

3 Perform airborne extraction operations

- 3.1 Helicopter is manoeuvred to extraction point
- 3.2 Extraction equipment is deployed in accordance with workplace procedures
- 3.3 Personnel are supervised and directed to attach to extraction equipment in accordance with workplace procedures
- 3.4 Situational awareness of extraction position and aircraft flight performance is maintained
- 3.5 Progress of extraction operation is communicated
- 3.6 Personnel are directed to detach from extraction equipment

4 Respond to airborne extraction emergencies and abnormal situations	4.1	Airborne extraction emergencies and abnormal situations are identified, diagnosed and communicated
	4.2	Airborne extraction emergency or remedial actions are undertaken to maintain safety of flight and personnel

Foundation Skills

Foundation skills essential to performance are explicit in the performance criteria of this unit of competency.

Range of Conditions

Range is restricted to essential operating conditions and any other variables essential to the work environment.

Airborne extraction equipment must include one or more of the following items:	• attachment devices • caving ladder • eye goggles • head protection • hearing protection • rappelling attachment device • rappelling gloves • rappelling harness • suspended extraction ropes
Extraction personnel characteristics to be considered include:	• experience of personnel (advanced, beginners) • size • variations in extraction equipment to be worn • weight
Airborne extraction supervisor must include one of the following:	• airborne team leader • airborne safety officer • aircrewman • chalk commander • drop master • loadmaster • observer • rescue crewman
Helicopter safety hazards must include:	• fauna • flora • foreign object damage (FOD) • loss of visual reference

- Airborne extraction emergencies must include one or more of the following:
- man-made structures
 - meteorological conditions
 - other aircraft
 - ship movements
 - ship structures and rigging
 - smoke
 - terrain
 - aircraft emergencies
 - extraction equipment/extracted personnel snagged in trees/obstacles
 - extraction equipment malfunction
 - extracted personnel unable to detach from rope

Unit Mapping Information

This unit replaces and is equivalent to AVIY4055A Conduct airborne extraction operations.

Links

Companion Volume implementation guides are found in VETNet -

<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=4725260a-0af3-4daf-912b-ef1c2f3e5816>

Assessment Requirements for AVIY4055 Conduct airborne extraction operations

Modification History

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Performance Evidence

Evidence required to demonstrate competence in this unit must be relevant to and satisfy all of the requirements of the elements, performance criteria and range of conditions on at least one occasion and include:

- applying precautions and required action to minimise, control or eliminate identified hazards
- applying relevant helicopter aeronautical knowledge
- attaching and security checking extraction equipment
- briefing crew and supervisor in accordance with workplace procedures
- communicating extraction operation progress in accordance with workplace procedures
- communicating helicopter safety hazards, wind speed and direction, approach and overshoot paths
- communicating to pilot, information relevant to aircraft vertical /horizontal position
- completing airborne extraction equipment pre-flight serviceability checks
- completing relevant documentation
- determining and calculating extraction zone characteristics and dimensions
- determining wind speed and direction
- directing personnel to attach and detach from extraction equipment in accordance with workplace procedures
- following relevant legislation and workplace procedures
- identifying, communicating and diagnosing airborne extraction emergencies in accordance with workplace procedures
- implementing contingency plans
- monitoring work activities in terms of planned schedule
- operating and adapting to differences in communications equipment in accordance with established procedures
- performing operational personnel/equipment weight calculations
- planning own work, predicting consequences and identifying improvements
- reading, interpreting and applying relevant regulations, legislation, policies and procedures
- reading, interpreting and following relevant regulations, instructions, procedures, information and signs
- reporting and/or rectifying identified problems, faults or malfunctions promptly, in accordance with established procedures
- taking actions in a remedial and/or emergency situation in accordance with aircraft flight manuals, organisational policy and workplace procedures

- using communication skills for helicopter control
- working collaboratively with others
- working systematically with required attention to detail without injury to self or others, or damage to goods or equipment.

Knowledge Evidence

Evidence required to demonstrate competence in this unit must be relevant to and satisfy all of the requirements of the elements, performance criteria and range of conditions and include knowledge of:

- airborne extraction emergency procedures
- airborne extraction equipment capabilities, correct configuration and limitations
- airborne extraction risk management processes
- airborne extraction safety and configuration
- airborne extraction verbal/non-verbal communication procedures
- aircraft earthing procedures
- approved operational procedures and processes for different airborne extraction operations
- helicopter approach and overshoot considerations
- helicopter capabilities and limitations as defined in aircraft publications/documentation
- procedures and protocols for using communication systems during an emergency
- relevant regulations, legislation, organisational policy and procedures
- typical problems that may occur when conducting airborne extraction operations, and appropriate actions and solutions
- work health and safety (WHS)/occupational health and safety (OHS) issues applicable to extraction operations, aircraft and personnel safety.

Assessment Conditions

As a minimum, assessors must satisfy applicable regulatory requirements, which include requirements in the *Standards for Registered Training Organisations* current at the time of assessment.

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assessment.

Assessment processes and techniques must be appropriate to the language, literacy and numeracy requirements of the work being performed and the needs of the candidate.

Assessment must occur in workplace operational situations. Where this is not appropriate, assessment must occur in simulated workplace operational situations that reflect workplace conditions.

Resources for assessment must include access to:

- a range of relevant exercises, case studies and/or simulations
- acceptable means of simulation assessment
- applicable documentation including workplace procedures, regulations, codes of practice and operation manuals
- relevant materials, tools, equipment and personal protective equipment currently used in industry.

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