



Australian Government

Department of Education, Employment and Workplace Relations

AVIY4055A Conduct airborne extraction operations

Revision Number: 1

AVIY4055A Conduct airborne extraction operations

Modification History

Not applicable.

Unit Descriptor

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This unit involves the skills and knowledge required by airborne extraction supervisors to conduct personnel airborne extraction operations in a helicopter. Licensing, legislative, regulatory or certification requirements are applicable to this unit.

Application of the Unit

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Work must be carried out in compliance with the relevant regulatory requirements of the Civil Aviation Safety Authority (CASA) and national operating standards.

Use for ADF Aviation is to be in accordance with relevant Defence Orders and Instructions and applicable CASA compliance.

Operations are conducted across a variety of operational contexts within the Australian aviation industry.

Work is performed under limited supervision.

This unit of competency is nominally packaged at Certificate IV.

Licensing/Regulatory Information

Not applicable.

Pre-Requisites

Not applicable.

Employability Skills Information

Employability Skills This unit contains employability skills.

Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.

Performance criteria describe the required performance needed to demonstrate achievement of the element. Assessment of performance is to be consistent with the evidence guide.

Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1 Prepare helicopter and personnel for airborne extraction	<ul style="list-style-type: none">1.1 Helicopter and extraction equipment are pre-flight checked to determine serviceability1.2 Crew is briefed during mission brief1.3 Extraction team leader is briefed in accordance with workplace procedures1.4 Static ground rehearsals are conducted with personnel and equipment
2 Prepare for airborne extraction	<ul style="list-style-type: none">2.1 Extraction equipment is attached and checked for security2.2 Extraction zone characteristics and dimensions are determined and calculated2.3 Helicopter safety hazards are communicated using workplace procedures2.4 Extraction checks are conducted prior to extraction equipment deployment2.5 Wind speed and direction are communicated2.6 Approach and overshoot paths are communicated
3 Perform airborne extraction operations	<ul style="list-style-type: none">3.1 Helicopter is directed to extraction point3.2 Extraction equipment is deployed in accordance with workplace procedures3.3 Personnel are directed to attach to extraction equipment in accordance with workplace procedures3.4 Maintenance of aircraft position is communicated to pilot3.5 Progress of extraction operation is communicated in accordance with workplace procedures3.6 Personnel are directed to detach from extraction equipment
4 Respond to airborne extraction emergencies and abnormal situations	<ul style="list-style-type: none">4.1 Airborne extraction emergencies are identified, communicated and diagnosed in accordance with workplace procedures4.2 Emergency and/or remedial actions are undertaken in accordance with aircraft flight manuals, organisational policy and workplace procedures

Required Skills and Knowledge

REQUIRED KNOWLEDGE AND SKILLS

This describes the essential knowledge and skills and their level required for this unit.

Required knowledge:

- Regulations, legislation, organisational policy and procedures in relation to conducting airborne extraction operations
- Occupational health and safety issues applicable to operations, aircraft and personnel safety
- Approved operational procedures and processes for different airborne extraction operations
- Procedures and protocols for the use of communication systems during an emergency
- Airborne extraction verbal/non-verbal communication procedures
- Helicopter capabilities and limitations as defined in aircraft publications/documentation
- Airborne extraction equipment capabilities, correct configuration and limitations
- Airborne extraction emergency procedures
- Aircraft earthing procedures
- Helicopter approach and overshoot considerations
- Airborne extraction safety and configuration
- Airborne extraction risk assessment principles
- Typical problems that may occur when conducting airborne extraction operations and appropriate actions and solutions

Required skills:

- Perform airborne extraction operations
- Complete airborne extraction equipment pre-flight serviceability checks
- Use communication skills for helicopter control
- Determine wind speed and direction
- Operate airborne extraction equipment
- Perform weight calculations
- Apply airborne extraction risk assessment principles
- Interpret and follow flight and operational manuals and safety policies
- Read, interpret and apply regulations, legislation, policies and procedures relevant to airborne extraction operations
- Complete documentation related to work activities when conducting airborne extraction operations
- Work collaboratively with others when conducting airborne extraction operations
- Adapt appropriately to cultural differences in the workplace, including modes of behaviour and interactions with others

REQUIRED KNOWLEDGE AND SKILLS

- Promptly report and/or rectify any identified problems, faults or malfunctions that may occur when conducting airborne extraction operations in accordance with established procedures
- Implement contingency plans for unanticipated situations that may arise when conducting airborne extraction operations
- Apply precautions and required action to minimise, control or eliminate hazards that may exist when conducting airborne extraction operations
- Plan own work including predicting consequences and identifying improvements
- Monitor work activities in terms of planned schedule
- Work systematically with required attention to detail without injury to self or others, or damage to goods or equipment
- Operate and adapt to differences in communication equipment in accordance with established procedures

Evidence Guide

EVIDENCE GUIDE

The Evidence Guide provides advice on assessment and must be read in conjunction with the performance criteria, required knowledge and skills, the range statement and the assessment guidelines for this Training Package.

Critical aspects for assessment and evidence required to demonstrate competency in this unit

- The evidence required to demonstrate competency in this unit must be relevant to and satisfy all of the requirements of the elements and performance criteria of this unit and include demonstration of:
 - applying the underpinning knowledge and skills
 - following relevant legislation and workplace procedures
 - conducting serviceability pre-flight checks of helicopter and extraction equipment
 - briefing crew and extraction team leader in accordance with workplace procedures
 - attaching and security checking extraction equipment
 - determining and calculating extraction zone characteristics and dimensions
 - communicating helicopter safety hazards, wind speed and direction, approach and overshoot paths
 - communicating to pilot maintenance of aircraft position
 - directing personnel to attach and detach from extraction equipment in accordance with workplace procedures
 - communicating extraction operation progress in accordance with workplace procedures
 - identifying, communicating and diagnosing airborne extraction emergencies in accordance with workplace procedures
 - taking actions in a remedial and/or emergency situation in accordance with aircraft flight manuals, organisational policy and workplace procedures

Context of and specific resources for assessment

- Performance is demonstrated consistently over a period of time and in a suitable range of contexts
- Resources for assessment include:
 - a range of relevant exercises, case studies and/or other simulated practical and knowledge assessment, and/or
 - access to an appropriate range of relevant operational situations in the workplace
 - In both real and simulated environments, access is required to:
 - relevant and appropriate materials and equipment, and
 - applicable documentation including workplace procedures, regulations, codes of practice and operation

EVIDENCE GUIDE

Method of assessment

manuals

- Assessment of this unit must be undertaken by a registered training organisation
- As a minimum, assessment of knowledge must be conducted through appropriate written/oral tests
- Practical assessment must occur:
- through activities in an appropriately simulated environment at the registered training organisation, and/or
- in an appropriate range of situations in the workplace

Range Statement

RANGE STATEMENT

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance.

Aircraft may include:	<ul style="list-style-type: none">• single or multiple engine• single or multiple rotors• other airborne vehicles
Airborne extraction supervisor may include:	<ul style="list-style-type: none">• aircrewman• rescue crewman• airborne safety officer• loadmaster• observer• airborne team leader• chalk commander
Work environment may include:	<ul style="list-style-type: none">• by day or by night• over land or over sea• prepared or unprepared helicopter landing sites
Airborne extraction emergencies may include:	<ul style="list-style-type: none">• aircraft emergencies• extracted personnel unable to detach from rope• extraction equipment/extracted personnel snagged in trees/obstacles• extraction equipment malfunction
Extraction personnel characteristics may include:	<ul style="list-style-type: none">• beginners• advanced• size• weight• extraction equipment variations
Airborne extraction equipment may include:	<ul style="list-style-type: none">• rappelling harness• head protection• eye goggles• hearing protection• rappelling gloves• suspended extraction ropes• caving ladder• attachment devices• rappelling attachment device
Helicopter safety hazards may include:	<ul style="list-style-type: none">• man-made structures• smoke• meteorological conditions• terrain

RANGE STATEMENT

	<ul style="list-style-type: none"> • other aircraft • flora • fauna • ship structures and rigging • ship movements • loss of visual reference • foreign object damage (FOD)
Locations and surrounds may include:	<ul style="list-style-type: none"> • helicopter landing site • unprepared helicopter landing site
Depending on the type of organisation concerned and the local terminology used, workplace procedures may include:	<ul style="list-style-type: none"> • company procedures • enterprise procedures • organisational procedures • established procedures • standard operating procedures
Documentation may include:	<ul style="list-style-type: none"> • relevant sections of Civil Aviation Safety Regulations • in Defence context, relevant Defence Orders and Instructions • Flight Manual/Pilot's Operating Handbook (POH) • Aeronautical Information Publication (AIP) • charts • operations manuals • approved checklists • organisational policy and procedures manuals • aviation maintenance documentation • workplace procedures and instructions and job specification • induction and training materials • conditions of service, legislation and industrial agreements including workplace agreements and awards
Applicable regulations and legislation may include:	<ul style="list-style-type: none"> • relevant Civil Aviation Safety Regulations and Civil Aviation Orders • in Defence context, relevant Defence Orders and Instructions • relevant state/territory OH&S legislation • relevant state/territory environmental protection legislation • relevant Australian Standards

Unit Sector(s)

Not applicable.

Competency field

Competency Field Y - Aircraft Operation and Traffic Management