



**Australian Government**

# **AVIW2033 Rappel from a helicopter**

**Release: 1**

# **AVIW2033 Rappel from a helicopter**

## **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 rappel from a helicopter, in compliance with relevant regulatory requirements of the Civil Aviation Safety Authority (CASA) and national operating standards.

It includes applying aircraft safety procedures, preparing for rappelling operations, and emplaning and completing on-board procedures. It also includes rappelling from a hovering helicopter and de-servicing rappelling equipment.

This unit addresses aviation technical skill requirements (physical, mental and task-management abilities) related to equipment and system operations of flight or ground operations personnel, 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 as a single operator or within a team 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**

W – Equipment and Systems Operations

## **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.

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|---------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>1 Apply aircraft safety procedures</b>         | 1.1 Dress and equipment is secured for operating in and around a helicopter<br><br>1.2 Helicopter is approached, entered and exited in a safe manner in accordance with workplace procedures and/or flight crew instructions<br><br>1.3 Individual seating is occupied and restraint devices are applied<br><br>1.4 Identified hazards are communicated to rappel team members<br><br>1.5 Flight crew instructions are followed<br><br>1.6 Environmental conditions and alternative routes to/from helicopter are identified                                                                                       |
| <b>2 Prepare for rappelling operation</b>         | 2.1 Rappelling descent instructions are received and confirmed as required<br><br>2.2 Workplace procedures, work health and safety (WHS)/occupational health and safety (OHS) requirements and safety control measures are applied<br><br>2.3 Operational and rappel equipment including personal protective equipment (PPE) is selected and fitted in accordance with workplace procedures<br><br>2.4 Individual pre-flight check of rappel equipment is conducted<br><br>2.5 Damage to operational, rappel and safety equipment is reported and remedial action is taken in accordance with workplace procedures |
| <b>3 Emplane and complete on-board procedures</b> | 3.1 Aircraft is approached and emplaned in accordance with workplace procedures<br><br>3.2 Ropes are secured to allocated rope attachment device, checked and prepared for flight<br><br>3.3 Rappellers and operational equipment are secured prior to flight                                                                                                                                                                                                                                                                                                                                                      |

- 3.4 Flight crew orders and instructions are complied with
- 3.5 Rappelling and operational equipment are monitored during flight
- 3.6 Communications and directions are interpreted and relayed to rappellers
- 3.7 Individual in-flight safety checks are conducted
- 4 Rappel from helicopter**
  - 4.1 Rappelling exit positions are adopted under supervision of flight crew or safety officer
  - 4.2 Positions are resumed in aircraft on abort instruction from flight crew
  - 4.3 Aircraft is exited on instruction of flight crew or safety officer
  - 4.4 Descent is undertaken in a controlled manner in accordance with workplace procedures
  - 4.5 Aircraft emergency and rappelling contingency procedures are implemented as required
  - 4.6 Landing is conducted in a controlled manner in accordance with workplace procedures
  - 4.7 Rappel signals are communicated to flight crew once descent is complete
  - 4.8 On landing, rope is disconnected and landing area is cleared in accordance with workplace procedures
  - 4.9 Equipment is gathered and taken to designated team assembly point
- 5 De-service rappel equipment**
  - 5.1 Area is cleared in preparation for de-servicing of rappel equipment in accordance with workplace procedures
  - 5.2 Rappelling and operational equipment is de-serviced and stowed in accordance with workplace procedures

## 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.

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|------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Hazards must include one or more of the following:                     | <ul style="list-style-type: none"><li>• buildings</li><li>• dust</li><li>• livestock</li><li>• masts/aerials</li><li>• native fauna</li><li>• poor visibility</li><li>• public</li><li>• terrain</li><li>• trees</li><li>• vehicles</li><li>• weather conditions</li><li>• wire/power lines/fences</li></ul>                                                                                                                                                                                                                                                                                                                                                                                                 |
| Environmental conditions must include:                                 | <ul style="list-style-type: none"><li>• climate and weather variations</li><li>• geographical and geological variations including sloping and unstable ground</li><li>• variations due to vegetation and urban structures</li><li>• ground conditions including dust and other particles</li></ul>                                                                                                                                                                                                                                                                                                                                                                                                           |
| Aircraft emergency and rappelling contingency procedures must include: | <ul style="list-style-type: none"><li>• aborted operation</li><li>• aircraft collision</li><li>• aircraft crash landing</li><li>• aircraft fire</li><li>• aircraft malfunction prior to take-off</li><li>• damaged or kinked rope</li><li>• emergency landing procedures</li><li>• emergency retrieval of rappeller/s</li><li>• engine failure over landing site</li><li>• in a Defence context – procedures to evade hostile action against aircraft or self</li><li>• loss of rappel control during descent</li><li>• loss of visibility</li><li>• rappeller collision with others or obstacles</li><li>• rappeller hang-up</li><li>• rappeller lost brake</li><li>• rappeller injury on landing</li></ul> |

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|-----------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Operational and rappel equipment must include one or more of the following: | <ul style="list-style-type: none"><li>• rappeller inversion</li><li>• rappeller lost balance during transition (premature exit)</li><li>• rappelling rope caught in tree</li><li>• commercial in-service rappelling harness</li><li>• communications equipment</li><li>• descending device/s</li><li>• descent rope</li><li>• improvised tubular webbing harness</li><li>• incident response equipment</li><li>• individual load carrying equipment (ILCE)</li><li>• military equipment relevant to rappelling operation</li><li>• search and rescue equipment</li></ul> |
| Personal protective equipment (PPE) must include:                           | <ul style="list-style-type: none"><li>• eye protection goggles</li><li>• footwear</li><li>• hearing protection</li><li>• helmet</li><li>• high visibility clothing</li><li>• leg bags</li><li>• life jacket</li><li>• personal lighting and beacons</li><li>• protective clothing</li><li>• rappelling gloves</li></ul>                                                                                                                                                                                                                                                  |
| Communications must include:                                                | <ul style="list-style-type: none"><li>• hand signals</li><li>• interpersonal communications</li><li>• radio</li></ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
| Individual in-flight safety checks must include:                            | <ul style="list-style-type: none"><li>• equipment checks</li><li>• rappelling equipment checks</li><li>• personal protective equipment checks</li><li>• seatbelt/restraint device</li></ul>                                                                                                                                                                                                                                                                                                                                                                              |
| Rappel exit positions must include:                                         | <ul style="list-style-type: none"><li>• forward exit</li><li>• 'L' position</li></ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |

## Unit Mapping Information

This unit replaces and is equivalent to AVIW2033A Rappel from a helicopter.

## 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 AVIW2033 Rappel from a helicopter

## Modification History

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

## 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:

- adapting to differences in equipment and operating environment in accordance with standard operating procedures
- applying organisational tactics, techniques and procedures
- applying precautions and required action to minimise, control or eliminate identified hazards
- approaching and exiting helicopter in a safe manner in accordance with workplace procedures and/or flight crew instructions
- communicating effectively with others
- completing relevant documentation
- conducting rappel, operational and safety equipment individual pre-flight and in-flight checks
- descending landing in a controlled manner in accordance with workplace procedures
- following relevant legislation and workplace procedures
- identifying, operating and controlling rappelling and operational equipment
- implementing contingency plans
- implementing work health and safety (WHS)/occupational health and safety (OHS) procedures and relevant regulations
- maintaining situational awareness when conducting rappelling operations
- modifying activities depending on workplace contingencies, situations and environments
- monitoring and anticipating operational problems and hazards and taking appropriate action
- monitoring work activities in terms of planned schedule
- operating helicopter restraint, safety and emergency equipment
- reading, interpreting and following relevant regulations, instructions, procedures, information and signs
- reporting and/or rectifying identified problems promptly, in accordance with regulatory requirements and workplace procedures
- selecting and using required personal protective clothing and equipment conforming to industry and WHS/OHS standards
- working collaboratively with others
- working systematically with required attention to detail without injury to self, 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:

- assembly point or marshalling area
- characteristics of helicopters including safety features and operating requirements
- hazards that exist when rappelling from a helicopter
- in a Defence context, relevant Defence Orders and Instructions
- manufacturer instructions for equipment used for rappelling from a helicopter
- problems that may occur when rappelling from a helicopter
- relevant Australian Standards
- relevant information/documents:
  - induction and training materials
  - operations manuals
  - workplace procedures and instructions, and job specification
- relevant legislation, regulations, organisational policy and procedures in relation to rappelling from a helicopter
- relevant WHS/OHS and environmental procedures and regulations
- risks that exist when rappelling from a helicopter
- safety equipment operation.

## 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.

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

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

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.

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.

## Links

Companion Volume implementation guides are found in VETNet -

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