



**Australian Government**

**Department of Education, Employment and Workplace Relations**

# **AVIY4054A Conduct hoisting operations**

**Revision Number: 1**

## **AVIY4054A Conduct hoisting operations**

### **Modification History**

Not applicable.

### **Unit Descriptor**

#### **Unit Descriptor**

This unit involves the skills and knowledge required to conduct hoisting operations from a helicopter and includes personnel and stores transfers, rescue net operations, stretcher lifts, double harness lifts and hi-line transfers. 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 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
<b>1 Prepare for hoisting operations</b>	<ul style="list-style-type: none"><li>1.1 Helicopter safety hazards are identified using established procedures</li><li>1.2 Aircraft power availability is calculated</li><li>1.3 Wind speed and direction are determined</li><li>1.4 Approach and overshoot paths are determined</li><li>1.5 Hoisting location and surrounds are checked for suitability</li><li>1.6 Hoist is prepared and checked for correct operation</li><li>1.7 Hoisting operation plan is developed and communicated to other crewmembers</li><li>1.8 Hoisting equipment is prepared and checked as required in accordance with relevant equipment manuals and publications</li></ul>
<b>2 Perform hoisting operations</b>	<ul style="list-style-type: none"><li>2.1 Helicopter is directed to hoisting point</li><li>2.2 Hoisting accessories are attached to the hoist hook and checked</li><li>2.3 Down wind checks are conducted in accordance with organisational policy and procedures</li><li>2.4 Commentary on the progress of hoisting operation is maintained as per established procedures</li><li>2.5 Passengers/stores are attached/removed, monitored, retrieved/dispatched and secured in accordance with organisational policy and procedures</li><li>2.6 Hoist is operated in accordance with aircraft operating manuals and organisational policy and procedures</li></ul>
<b>3 Respond to hoisting emergencies and abnormal situations</b>	<ul style="list-style-type: none"><li>3.1 Hoist emergencies are identified, communicated and diagnosed as per established procedures</li><li>3.2 Emergency and/or remedial actions are undertaken in accordance with aircraft flight manuals and organisational policy and procedures</li></ul>
<b>4 Conclude hoisting operations</b>	<ul style="list-style-type: none"><li>4.1 Hoisting equipment and/or accessories are removed from the hoist hook and stowed in accordance with aircraft operating manuals and organisational policy and procedures</li><li>4.2 Hoist is secured and checked in accordance with aircraft operating manuals, organisational policy and procedures</li><li>4.3 Aircraft maintenance documentation is completed in accordance with organisational policies and procedures</li></ul>

## **Required Skills and Knowledge**

### **REQUIRED KNOWLEDGE AND SKILLS**

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

#### **Required knowledge:**

- Helicopter capabilities and limitations
- Hoist capabilities and limitations
- Approved operational procedures and processes for different hoisting operations
- Occupational health and safety issues applicable to hoisting operations
- Aircraft safety
- Personnel safety
- Aircraft control voice and communication procedures
- Correct hoist and equipment configuration
- Approach and overshoot considerations
- Hoist emergency procedures
- Organisational policy and procedures in relation to conducting hoisting operations
- Abnormal/emergency conditions and responses
- Typical problems that may occur when conducting hoisting operations, actions and appropriate solutions
- Risk assessment principles
- CRM principles

#### **Required skills:**

- Operate hoist
- Assemble hoisting equipment
- Operate hoisting accessories
- Use communication skills for conning
- Complete hoisting recovery equipment operations
- Determine wind speed and direction
- Maintain situational awareness
- Apply CRM principles
- Complete documentation related to conducting hoisting operations
- Communicate effectively with others when conducting hoisting operations
- Read and interpret instructions and procedures relevant to conducting hoisting operations
- Interpret and follow operational instructions and prioritise work
- Identify and use required communication technology

**REQUIRED KNOWLEDGE AND SKILLS**

- Work collaboratively with others when conducting hoisting operations
- Adapt appropriately to cultural differences in the workplace, including modes of behaviour and interactions with others
- Promptly report and/or rectify any identified problems, faults or malfunctions that may occur when conducting hoisting operations in accordance with workplace procedures
- Implement contingency plans for unanticipated situations that may arise when conducting hoisting operations
- Apply precautions and required action to minimise, control or eliminate hazards that may exist when conducting hoisting operations
- Plan own work including predicting consequences and identifying improvements
- Monitor work activities in terms of planned schedule
- Modify activities depending on differing operational contingencies, risk situations and environments
- 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 standard operating 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
  - relevant legislation and workplace procedures
  - other relevant aspects of the range statement

### **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 manuals

### **Method of assessment**

- 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"><li>• single or multiple engine</li><li>• rotary wing</li></ul>  |
| Aircraft publications may include: | <ul style="list-style-type: none"><li>• checklists</li><li>• flight manuals</li><li>• organisational policy and procedures manuals</li><li>• aviation maintenance documentation</li></ul>  |
| Work environment may include:      | <ul style="list-style-type: none"><li>• by day or by night</li><li>• over land or over sea</li><li>• Prepared or Unprepared landing sites</li></ul>  |
| Hoisting operations may include:   | <ul style="list-style-type: none"><li>• personnel and stores transfer</li><li>• hi-line</li><li>• helicopter in-flight refuelling</li></ul>  |
| Hoisting equipment may include:    | <ul style="list-style-type: none"><li>• single rescue sling</li><li>• double lift harness</li><li>• rescue litter</li><li>• hi-line transfer equipment</li><li>• emergency slings</li><li>• rope harness sling</li><li>• rescue net</li><li>• double lift harness</li><li>• extension strop</li><li>• rescue strop</li><li>• transfer equipment and message bag</li><li>• stretchers</li></ul> |
| Hand signals may include:          | <ul style="list-style-type: none"><li>• hoist in/out</li><li>• hoist up/down</li><li>• boom in/out</li><li>• emergency descent</li><li>• move left/right</li><li>• cease movement</li><li>• come up/down</li><li>• aircraft go around</li><li>• stop hoisting</li><li>• ready to be hoisted</li><li>• all clear</li></ul>  |
| Environment for hoisting           | <ul style="list-style-type: none"><li>• over water</li></ul>   |



## RANGE STATEMENT

operations may include:

- over land
- forest/bush
- bushfire affected areas
- mountainous areas
- confined areas
- pinnacles
- ship/boat transfers

Abnormal/emergency situations may include:

- hoist equipment malfunction
- communication equipment failure
- aircraft system failure
- operator incapacitation
- hoistee incapacitation
- fouled cable
- fouled hoist
- runaway hoist
- intercom system failure during hoisting operations
- electrical/mechanical failure
- aircraft malfunction

Depending on the type of organisation concerned and the local terminology used, workplace procedures may include:

- company procedures
- enterprise procedures
- organisational procedures
- established procedures

Information/documentation may include:

- 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
- 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:

- relevant Civil Aviation Safety Regulations and Civil Aviation Orders
- in Defence context, relevant Defence Orders and Instructions
- relevant state/territory OH&S legislation

**RANGE STATEMENT**

- relevant state/territory environmental protection legislation
- relevant Australian Standards

**Unit Sector(s)**

Not applicable.

**Competency field**

**Competency Field**                      Y - Aircraft Operation and Traffic Management