



Australian Government

AVIY4054 Conduct hoisting operations

Release: 1

AVIY4054 Conduct hoisting 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 hoisting operations, in compliance with relevant regulatory requirements of the Civil Aviation Safety Authority and national operating standards.

It includes preparing for hoisting operations, performing hoisting operations, responding to hoisting emergencies and abnormal situations, and concluding hoisting operations.

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

PERFORMANCE CRITERIA

Elements describe the essential outcomes.	Performance criteria describe the performance needed to demonstrate achievement of the element.
1 Prepare for hoisting operations	1.1 Hoisting equipment is prepared and checked 1.2 Helicopter safety hazards are identified using established procedures 1.3 Aircraft power availability is calculated 1.4 Wind speed and direction are determined 1.5 Approach and overshoot paths are determined 1.6 Hoisting location and surrounds are checked for suitability 1.7 Hoist is prepared and checked for correct operation 1.8 Hoisting operation plan is developed and communicated to flight crew
2 Perform hoisting operations	2.1 Helicopter is manoeuvred to the most appropriate hover position to perform safe hoisting operations 2.2 Hoisting accessories/equipment items are checked and attached to hoist hook 2.3 Aircraft operational/control checks are conducted as required 2.4 Flight crew situational awareness of hoisting operation and aircraft flight performance is maintained using appropriate voice and/or non-verbal communication procedures 2.5 Passengers are deployed/dispatched, monitored, retrieved and secured to achieve operational requirements 2.6 Stores are deployed/dispatched, monitored, retrieved and secured to achieve operational requirements 2.7 Aircraft hoist system is operated in accordance with equipment operating procedures
3 Respond to hoisting emergencies and abnormal situations	3.1 Hoisting emergencies and abnormal situations are identified, diagnosed and communicated to other flight crew 3.2 Hoist emergency or remedial actions are undertaken to maintain safety of flight and/or to complete hoist operations
4 Conclude hoisting operations	4.1 Hoisting accessories/equipment items are removed from hoist hook and stowed

- 4.2 Hoist is secured and checked for serviceability
- 4.3 Aircraft maintenance documentation is completed

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.

Hoisting operations must include one or more of the following:

- hi-line transfer
- litter kit/equipment deployment/redeployment
- personnel deployment/redeployment
- rescue equipment deployment/redeployment
- stores deployment/redeployment

Hoisting equipment must include one or more of the following:

- double lift harness
- emergency slings
- extension strop
- hi-line transfer equipment
- rescue litter
- rescue net
- rescue sling/strop
- rope harness sling
- single rescue sling
- stretchers
- transfer equipment and message bag

Hoisting emergencies and abnormal situations must include one or more of the following:

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

- runaway hoist

Unit Mapping Information

This unit replaces and is equivalent to AVIY4054A Conduct hoisting 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 AVIY4054 Conduct hoisting 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 crew resource management (CRM) principles
- applying precautions and required action to minimise, control or eliminate identified hazards
- applying relevant helicopter aeronautical knowledge
- applying relevant legislation and workplace procedures
- assembling hoisting equipment
- communicating effectively with others
- completing relevant documentation
- deploying and redeploying hoist cable to full length:
 - in ground effect
 - out of ground effect
- determining wind speed and direction
- identifying and using required communications technology
- implementing contingency plans
- maintaining situational awareness
- modifying activities depending on operational contingencies, risk situations and environments
- monitoring work activities in terms of planned schedule
- operating and adapting to differences in communications equipment in accordance with standard operating procedures
- operating hoist and associated primary and alternate hoist controls
- operating hoisting accessories
- planning own work, predicting consequences and identifying improvements
- reading, interpreting and following relevant regulations, instructions, procedures, information and signs
- reporting and/or rectifying identified problems, faults or malfunctions promptly, in accordance with workplace procedures
- using communication skills for conning
- 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:

- abnormal/emergency situations and responses
- aircraft approach and overshoot considerations
- aircraft control voice and communications procedures
- aircraft safety including day and night considerations
- approved operational procedures and processes for different hoisting operations
- aviation risk management processes
- CASR Part 61 Manual of Standards Schedule 3 Aeronautical Knowledge relevant to helicopter operations
- correct hoist and equipment configuration
- crew resource management (CRM) principles
- helicopter capabilities and limitations
- hoist capabilities and limitations
- hoist emergency procedures
- hoisting considerations within a range of operational environments:
 - bushfire affected areas
 - confined areas
 - forest/bush
 - mountainous areas
 - over water
 - over land
 - pinnacles
 - ship/boat transfers
- meaning of non-verbal communications signals relevant to aircraft hoist configuration:
 - aircraft go around
 - all clear
 - boom in/out
 - cease movement
 - come up/down
 - emergency descent
 - hoist in/out
 - hoist up/down

- move left/right
- ready to be hoisted
- stop hoisting
- organisational policy and procedures for conducting hoisting operations
- typical problems that may occur and actions and appropriate solutions
- work health and safety (WHS)/occupational health and safety (OHS) issues applicable to hoisting operations.

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 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.

Links

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