



Australian Government

AVIY4051 Conduct external load-lift operations

Release: 1

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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 external load-lifting operations, in compliance with relevant regulatory requirements of the Civil Aviation Safety Authority and national operating standards.

It includes preparing for load-lifting operations, performing load-lifting operations, concluding load-lifting operations, and responding to external load operational 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 for load-lifting operations | <p>1.1 External load characteristics and dimensions are determined and calculated</p> <p>1.2 Aerial delivery equipment is prepared and checked as required, in accordance with equipment manuals and publications</p> <p>1.3 Helicopter cargo hook system is prepared and checked for correct operation</p> <p>1.4 Aircraft safety hazards are identified using established procedures</p> <p>1.5 Aircraft power availability is calculated</p> <p>1.6 Wind speed and direction are determined</p> <p>1.7 Approach and overshoot paths are determined</p> <p>1.8 Load-lifting location and surrounds are checked for suitability</p> <p>1.9 External load-lifting plan is developed and communicated to other crew members</p> |
| 2 Perform load-lifting operations | <p>2.1 Helicopter is manoeuvred to external load-lifting point</p> <p>2.2 Aircraft operational checks are conducted</p> <p>2.3 External load is connected using appropriate operational method</p> <p>2.4 Situational awareness of inflight load stability and aircraft flight performance is maintained</p> <p>2.5 External load is released at nominated delivery point</p> |
| 3 Conclude load-lifting operations | <p>3.1 Aerial delivery equipment is recovered as required</p> <p>3.2 Aircraft external load hook equipment and control systems are secured and checked for serviceability</p> |
| 4 Respond to external | <p>4.1 External load operational emergencies are identified,</p> |

**load operational
emergencies and
abnormal situations**

- 4.2 diagnosed and communicated
External load operational emergency or remedial actions are undertaken to maintain safety of flight

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.

- External load characteristics consist of one or more of the following attributes:
- dangerous goods
 - dimensions
 - fragility
 - non-dangerous
 - rigging requirements
 - size
 - weight
- Aerial delivery equipment must include one or more of the following:
- cargo nets
 - chains
 - clevis assemblies
 - D rings
 - drogue chutes
 - firefighting buckets
 - hooks
 - lifting slings
 - palnets
 - pendant assemblies
 - rigging cordage
 - semi-rigid strops
 - shackles
 - single link assemblies
 - strops
 - swivel assemblies
- Aircraft safety hazards must include one or more of the following:
- fauna
 - flora
 - man-made structures

- External load operational emergencies and abnormal situations must include one or more of the following:
- meteorological conditions
 - other aircraft
 - ship structures and rigging
 - ship movements
 - smoke
 - terrain
 - communications system failure
 - helicopter electrical or mechanical system failure or malfunction
 - inadvertent release of external load
 - inflight external load instability

Unit Mapping Information

This unit replaces and is equivalent to AVIY4051A Conduct external load-lift operations.

Links

Companion Volume implementation guides are found in VETNet - <https://vetnet.education.gov.au/Pages/TrainingDocs.aspx?q=4725260a-0af3-4daf-912b-ef1c2f3e5816>