



Australian Government

AVIY0021 Operate helicopter at low level

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 operate a helicopter at low level, in compliance with relevant regulatory requirements of the Civil Aviation Safety Authority and national operating standards.

It includes planning low-level operations, manoeuvring a helicopter at low level, and performing quick stop manoeuvres. It also includes executing reversal turns, executing a forced landing from below 200 feet (ft) above ground level (AGL), and operating at low level in hilly terrain.

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 Plan low-level operations

- 1.1 Requirement to operate at low level is identified and justified in accordance with workplace procedures and regulatory requirements
- 1.2 Low-level operational hazards are identified, evaluated and risk managed, and appropriate decision is made concerning the safe conduct of these operations
- 1.3 Aircraft type and performance is assessed as appropriate for low-level operations
- 1.4 Consultation with all relevant stakeholders involved in a low-level operation is completed to confirm task/operating requirements
- 1.5 Pre-flight inspection is correctly performed, and aircraft serviceability type and performance are determined as appropriate for the task
- 1.6 Actual and forecast weather conditions are analysed for effects on low-level operations
- 1.7 Area of low-level operations is identified using chart and geographical features, including the boundary where low flying may commence and normal flight altitude is required
- 1.8 Action plans for the operation are formulated to ensure safe and effective operation of a helicopter at low level
- 1.9 Unplanned manoeuvres are avoided
- 1.10 Compliance is maintained with air traffic control (ATC) instructions, regulatory and reporting requirements

2 Manoeuvre helicopter at low level

- 2.1 Low-level flight manoeuvres are performed safely using pre-planned manoeuvres at planned altitudes
- 2.2 Effects of wind velocity, false horizons, rising ground and mountainous terrain are managed, and control of helicopter is correctly maintained
- 2.3 Visual attention is focused outside the cockpit

- 2.4 Lookout is maintained using a systematic scan technique at a rate determined by traffic density, visibility and/or terrain
- 2.5 Natural horizon is used as primary attitude reference
- 2.6 Nose of aircraft is cleared to ensure forward visibility when appropriate
- 2.7 Situational awareness is maintained at all times during low-level manoeuvres
- 2.8 Helicopter is safely manoeuvred adjacent to power lines and wires
- 2.9 All obstacles are identified, and are appropriately and safely avoided
- 2.10 Personnel, animals, vehicles and buildings are identified, and are appropriately and safely avoided
- 2.11 Height is maintained by visual reference to earth's surface when below 500 ft AGL
- 2.12 Weather conditions are monitored and appropriate responses are made
- 2.13 Fuel status is monitored and appropriate responses are made
- 2.14 Local and published noise abatement requirements and curfews are observed

3 Perform quick stop manoeuvre

- 3.1 Deceleration of helicopter from forward flight is initiated into wind, maintaining height to terminate to the hover at nominated hover point
- 3.2 Aircraft is turned and decelerated or decelerated and turned, maintaining height by controlled action, to terminate to the hover at nominated hover point, into wind
- 3.3 Deceleration/acceleration manoeuvres are conducted within the time and distance limitations specified while maintaining a constant height above the surface
- 3.4 Wind velocity is estimated and is appropriately taken into account in manoeuvres
- 3.5 Helicopter inertia is anticipated and appropriate allowance is made in manoeuvres

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| | 3.6 | Situation awareness is maintained at all times during a quick stop manoeuvre |
| | 3.7 | Obstructions are identified, and are appropriately and safely avoided |
| 4 Execute forced landing from 200 ft AGL | 4.1 | Emergency situations requiring a forced landing are identified |
| | 4.2 | Appropriate immediate actions are performed |
| | 4.3 | Landing area within autorotative distance is selected and appropriate action plan is formulated |
| | 4.4 | Emergency procedures are performed |
| | 4.5 | Emergency radio messages of intentions are transmitted |
| | 4.6 | Helicopter is landed and shut down as required |
| 5 Operate at low level in hilly terrain | 5.1 | Helicopter is safely manoeuvred at low level in hilly terrain |
| | 5.2 | Safe operating heights relevant to low-level operation type are established and maintained |
| | 5.3 | Terrain flight following techniques are applied during low-level operations |
| | 5.4 | Appropriate geographical features and markers are identified and selected to aid situational awareness |
| | 5.5 | Rising and falling ground/terrain is identified and approached using safe flying techniques, including identifying abort points and escape routes |
| | 5.6 | Effects of wind and turbulence in hilly terrain, including lee effects are identified and managed |
| | 5.7 | Spatial disorientation factors relevant to low-level operations are identified and applied to low-level manoeuvres |

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.

Unit Mapping Information

This unit replaces and is not equivalent to AVIY4019B Operate helicopter at low level.

Links

Companion Volume implementation guides are found in VETNet -

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