



Australian Government

AVIY0061 Take off helicopter and approach to hover

Release: 1

AVIY0061 Take off helicopter and approach to hover

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 control a helicopter in hovering flight in compliance with relevant regulatory requirements of the Civil Aviation Safety Authority (CASA) and national operating standards.

It includes lifting off to hover and performing hovering checks, hovering a helicopter in cross- and tail-winds, performing turns around the mast, conducting turns around nose and tail, and performing sideways and backwards flight. It also includes landing from the hover, managing a mishandled landing, and managing a mishandled lift off.

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.

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 Carry out pre-take-off checks

- 1.1** Pre-take-off checks and safety briefings are completed
- 1.2** Safe take-off path is selected
- 1.3** Helicopter is lined up in take-off direction and is positioned at the optimum position within the helicopter landing site (HLS)
- 1.4** Line-up checks are performed in accordance with approved checklist as required

2 Take off helicopter

- 2.1** Air traffic control (ATC) clearances are obtained and compliance is maintained with clearance conditions and requirements when operating within controlled airspace
- 2.2** Helicopter is transitioned from a stationary position in a specified direction passing through translational lift, remaining clear of obstructions, and establishing and maintaining a recommended or nominated climb speed
- 2.3** Helicopter flight path is controlled using appropriate flight handling techniques, including awareness of helicopter performance considerations, aircraft balance and flight control trim, as required
- 2.4** Power and attitude are managed for flight path, departure profile and indicated airspeed (IAS) being flown
- 2.5** Local and published noise abatement requirements and curfews are observed
- 2.6** Situational awareness of circuit traffic is maintained and conflict avoided

3 Approach to hover

- 3.1** Suitable termination point is selected
- 3.2** Pre-landing checks are completed in accordance with approved checklist
- 3.3** Appropriate approach angle and track is intercepted and approach manoeuvres conducted in accordance with ATC instructions
- 3.4** Helicopter is descended to hover at selected termination point at a reducing closure rate and along a specified

- track on an approach angle appropriate to helicopter type and conditions
- 3.5 Landing gear is aligned to planned approach direction
 - 3.6 Loss of translational lift is recognised and controlled
 - 3.7 Revolutions per minute (RPM) is managed within normal operational limits
 - 3.8 Approach is terminated at hover over termination point
- 4 Perform go-around procedure**
- 4.1 Critical situations are recognised and timely decisions made to go-around in circumstances that require discontinuing a circuit or approach
 - 4.2 Go-around is initiated
 - 4.3 Power and attitude are set to initiate safe climb at appropriate IAS from any position in the circuit
 - 4.4 Obstructions and traffic are appropriately avoided during climb following a decision to go-around
 - 4.5 Lookout is maintained using a systematic scan technique at a rate determined by traffic density, visibility or terrain
 - 4.6 Situational awareness of circuit traffic is maintained throughout go-round procedure
 - 4.7 After-take-off checks are completed in accordance with approved checklist
 - 4.8 Local and published noise abatement requirements and curfews are observed

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 equivalent to AVIY4014 Take off helicopter and approach to hover.

Links

AVI Training Package Companion Volume Implementation Guide available on VET Net: -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=4725260a-0af3-4daf-912b-ef1c2f3e5816>

Assessment Requirements for AVIY0061 Take off helicopter and approach to hover

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 and performance criteria on at least one occasion and include:

- adapting to differences in equipment and operating environment in accordance with standard operating procedures (SOPs)
- applying precautions and required action to minimise, control or eliminate identified hazards
- applying relevant helicopter aeronautical knowledge
- applying relevant legislation and workplace procedures
- communicating effectively with others
- completing relevant documentation
- identifying and correctly using relevant equipment
- implementing contingency plans
- implementing work health and safety (WHS) procedures and relevant regulations
- interpreting and following operational instructions and prioritising work
- 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 electronic communications equipment to required protocol
- 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 relevant controls/equipment, including throttle, rotor controls, anti-torque pedals, and collective and cyclic pitch controls
- selecting and using required personal protective equipment (PPE) conforming to industry and WHS standards
- setting local or area barometric pressure adjusted for sea level (QNH) at appropriate stages of flight
- solving problems when controlling a helicopter in hovering flight
- using instruments to monitor helicopter performance
- working collaboratively with others when controlling helicopter in hovering flight
- 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 and performance criteria and include knowledge of:

- aerodynamic factors affecting helicopter flight performance
- air traffic requirements
- aircraft flight manual (AFM) and pilot's operating handbook (POH)
- aircraft performance
- aircraft systems
- aircraft weight and balance
- all pre- and after- take-off and pre- and after- landing checks
- application of a height/velocity diagram/graph
- avoidance and recognition of recovery techniques appropriate to helicopter type
- basic principles of aerodynamics
- Civil Aviation Safety Regulation (CASR) Part 61 Manual of Standards (MOS) Schedule 3 Aeronautical Knowledge relevant to helicopter operations
- contributing operational situations and environmental conditions
- day visual flight rules (VFR) criteria
- factors affecting take-off and climb performance
- flapback
- functions and effects of all helicopter controls
- ground effect
- hazards and risks when taking off a helicopter and controlling its approach to hover and precautions for controlling the risks
- inflow roll
- local air traffic control (ATC) procedures and instructions
- loss of tail rotor effectiveness (LTE)
- low 'g' force and mast bumping
- overpitching or low rotor revolutions per minute (RRPM) speed – rotor stall
- problems that may occur when taking off a helicopter and controlling its approach to hover and appropriate action that should be taken in each case
- procedures for using performance charts
- purpose and functions of helicopter systems
- recirculation
- relevant sections of CASRs and Civil Aviation Orders
- relevant WHS and environmental procedures and regulations
- settling with power
- translational lift
- vortex ring state
- weight and balance.

Assessment Conditions

Assessors must hold credentials specified within the Standards for Registered Training Organisations current at the time of assessment.

Assessment must satisfy the Principles of Assessment and Rules of Evidence and all regulatory requirements included within 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 PPE currently used in industry.

Links

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