Australian Government

Assessment Requirements for AVIY4017 Execute advanced helicopter manoeuvres and procedures

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.

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
- 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
- following air traffic control procedures and instructions
- identifying and correctly using relevant equipment
- implementing contingency plans
- implementing work health and safety (WHS)/occupational health and safety (OHS) procedures and relevant regulations
- interpreting and following operational instructions and prioritising work
- interpreting/using a helicopter manufacturer height-velocity diagram/graph
- 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
- performing autorotative flight:
  - power recovery
  - power termination
  - autorotative landing
- 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 equipment
- selecting and using required personal protective equipment conforming to industry and WHS/OHS standards

- setting local or area barometric pressure adjusted for sea level (QNH) at appropriate stages of flight
- solving problems
- using instruments to monitor helicopter performance
- 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 and performance criteria and include knowledge of:

- actions to be conducted following a forced landing
- aerodynamic factors affecting helicopter flight performance, including:
  - aerodynamic forces
  - dynamic rollover
  - settling with power
  - recirculation
  - loss of tail rotor (anti-torque) effectiveness (LTE)
- all applicable checklist items
- application of a height/velocity diagram/graph
- basic principles of aerodynamics
- CASR Part 61 Manual of Standards Schedule 3 Aeronautical Knowledge relevant to helicopter operations
- cross-wind and rotor control limits for a helicopter
- crosswind loss of rotor control limits for helicopter type flown
- emergency radio procedures
- functions and effects of all helicopter controls
- hazards and risks when executing advanced helicopter manoeuvres and procedures and precautions for controlling the risks
- helicopter performance limitations
- local air traffic control procedures and instructions
- local weather conditions
- pinnacle and ridge line landing techniques:
  - intercept and maintain the approach path to the termination point
  - maintain effective translational lift until touchdown is assured
  - terminate to a hover over selected landing and lift-off area
  - touchdown on nominated touchdown point

    - control helicopter on the ground
- pinnacle and ridge line lift off techniques:
    - plan take-off from in a pinnacle or ridgeline
    - calculate and confirm helicopter take-off performance is adequate for departure
    - determine an appropriate abort point as required
    - conduct take-off and departure from pinnacle or ridgeline remaining clear of obstacles with a margin that is applicable to the operation
- power required and power available curves
- pressure altitude and density considerations
- problems that may occur when executing advanced helicopter manoeuvres and procedures, and appropriate action that should be taken in each case
- procedures for using performance charts
- purpose and functions of helicopter systems
- relevant instructions, procedures and information
- relevant sections of Civil Aviation Safety Regulations and Civil Aviation Orders
- relevant WHS and environmental procedures and regulations
- typical hazards and risks associated with conducting advanced manoeuvres, and precautions and procedures to control the risks
- wind and terrain effects.

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

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