



Australian Government

AVIY0090 Pilot a helicopter during external load operations

Release: 1

AVIY0090 Pilot a helicopter during external load 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 pilot a helicopter during external load operations in compliance with relevant regulatory requirements of the Civil Aviation Safety Authority (CASA) Manual of Standards LL-SO Sling operations and national operating standards.

It includes planning and preparing for external load operations, conducting pre-flight briefings, and operating the helicopter during external load operations. It also includes managing abnormal and emergency situations and conducting post-flight activities.

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 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.

If the Manual of Standards is amended after the publication of this unit of competency, the delivery of the unit must be in accordance with the latest Manual of Standards as published by CASA.

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 Prepare and rig a sling load

1.1 External load tasking requirements are identified

1.2 External load is secured, stabilised and rigged in accordance with workplace procedures

2 Plan external load operations

2.1 External load procedures, equipment and personnel required for task are determined

2.2 Helicopter performance data is interpreted and calculated to ensure suitability of aircraft for external load operations

2.3 Outbound and return flight routes are planned

2.4 Secure and stable load preparations are arranged

2.5 Load-lifting equipment strength and suitability are assessed

3 Conduct pre-flight briefings for external load operations

3.1 Requirements of load task are explained and confirmed

3.2 Personnel responsible for inspecting load-lifting equipment for serviceability and security are identified

3.3 Communication and hook-up procedures are explained

3.4 Hook-up person and hook-up procedure are specified

3.5 Departure, transit, approach, termination and load release procedures are explained

3.6 Emergency procedures are explained and confirmed

3.7 Pilot vertical reference (long line) procedure is explained

3.8 Crew and ground loadmaster are briefed on all aspects of the load-lifting task

3.9 Seating is adjusted to ensure full exercise of flight controls and ability to scan instrument panel

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| | 3.10 | Helicopter performance data is interpreted and calculated to ensure suitability of aircraft for operations |
| | 3.11 | Doors are removed and the security of internal equipment is arranged as required |
| 4 | Operate the aircraft during external load operations | |
| | 4.1 | Functional and safety checks on equipment are performed and defects reported |
| | 4.2 | Fuel and cargo load combinations to achieve task are calculated |
| | 4.3 | Adequacy of power margin and directional control are determined |
| | 4.4 | Stable hover over load during hook-up/delivery procedures is maintained |
| | 4.5 | External load is lifted and transported to a separate location and placed at a specified position |
| | 4.6 | External load is monitored and appropriate actions taken to ensure load security and stability during flight |
| | 4.7 | Excessive load swing during transit is avoided |
| 5 | Manage abnormal and emergency situations during external load operations | |
| | 5.1 | Helicopter control is maintained |
| | 5.2 | Abnormal and/or emergency situations are identified and managed in accordance with workplace procedures and aircraft flight manual (AFM) or pilot operating handbook (POH) |
| | 5.3 | Load is jettisoned when appropriate |
| 6 | Conduct post-flight activities for external load operations | |
| | 6.1 | Operating procedures and outcomes of flight are reviewed and analysed |
| | 6.2 | Effectiveness, efficiency and performance of equipment are analysed and reported |

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.

Non-essential conditions may be found in the AVI Aviation Training Package Companion Volume Implementation Guide.

Unit Mapping Information

This unit replaces and is equivalent to AVIY0069 Pilot a helicopter during external load 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 AVIY0090 Pilot a helicopter during external load 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 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
- communicating effectively with others
- completing relevant documentation
- following relevant legislation and workplace procedures
- identifying and assessing vertical, horizontal and relative spatial distances in relation to aircraft fuselage, rotor system, mission and/or operational stores and equipment with regard to potential obstacles to flight safety
- identifying and correctly using equipment required when operating a helicopter during external load operations
- implementing contingency plans
- implementing work health and safety (WHS)/occupational health and safety (OHS) procedures and relevant regulations
- interpreting hover performance and power available/power required from graphs/charts
- maintaining situational awareness
- managing abnormal and emergency situations
- 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 external load scan techniques
- preparing and rigging sling load, including all sub-tasks in accordance with workplace procedures and the aircraft flight manual (AFM)/pilot's operating handbook (POH)
- reading and interpreting relevant instructions, procedures and information
- reporting and/or rectifying identified problems promptly in accordance with regulatory requirements and workplace procedures
- selecting and using required personal protective equipment (PPE) conforming to industry and WHS/OHS standards

- setting local or area barometric pressure adjusted for sea level (QNH) at appropriate stages of flight
- using instruments to monitor helicopter performance during external load operations
- 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:

- Section 2.5 Low-level rating in Schedule 3 Manual of Standards
- relevant sections of Civil Aviation Safety Regulations (CASRs) and Civil Aviation Orders
- engine performance checks for the helicopter type to be flown
- aircraft performance calculations (for all phases of flight)
- internal and external load limitations for the aircraft type to be flown
- aerial delivery equipment operation, safe working loads and limitations
- cargo hook limitations, problems and hazards
- load rigging and preparation for flight
- principles of aerodynamics
- control effectiveness in all phases of flight
- hazards that exist and problems that can occur when operating an aircraft during external load operations
- procedures to address problems associated with a helicopter during external load operations
- aircraft dimensions
- vertical reference (long line) operation procedures if applicable
- external load lifting equipment inspection procedures
- communication procedure and terminology applicable to external load operations.

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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