



Australian Government

Department of Education, Employment and Workplace Relations

AVIY4013B Taxi helicopter

Revision Number: 1

AVIY4013B Taxi helicopter

Modification History

Not applicable.

Unit Descriptor

Unit Descriptor

This unit involves the skills and knowledge required to taxi a helicopter, including performing ground taxiing manoeuvres, air taxiing manoeuvres, and air transiting manoeuvres. Licensing, legislative, regulatory or certification requirements are applicable to this unit.

Application of the Unit

Application of the Unit

Work must be carried out in compliance with the relevant licence and aircraft rating requirements of the Civil Aviation Safety Authority (CASA) and/or ADF; airspace control requirements and Day Visual Flight Rules (Day VFR); and aircraft control principles, regulations, safety codes, protocols and procedures relating to taxiing a helicopter

Use for ADF Aviation is to be in accordance with relevant Defence Orders and Instructions and applicable CASA compliance.

Operations are conducted as part of commercial or military aircraft activities across a variety of operational contexts within the Australian aviation industry.

Work is performed under limited supervision.

This unit is nominally packaged at Certificate IV.

Licensing/Regulatory Information

Not applicable.

Pre-Requisites

Not applicable.

Employability Skills Information

Employability Skills This unit contains employability skills.

Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.

Performance criteria describe the required performance needed to demonstrate achievement of the element. Assessment of performance is to be consistent with the evidence guide.

Elements and Performance Criteria

| ELEMENT | PERFORMANCE CRITERIA |
|---|--|
| 1 Perform ground taxiing manoeuvres where applicable | <p>1.1 Taxi clearance is obtained and compliance is maintained with clearance conditions and requirements, if applicable</p> <p>1.2 Helicopter is manoeuvred on the ground over a prescribed track with due allowance for prevailing conditions</p> <p>1.3 Speed is adjusted to suit helicopter type, surface conditions, congestion, maintenance of control and to avoid collision with obstacles or other aircraft</p> <p>1.4 Turns in confined spaces are executed without incident</p> <p>1.5 Adverse effects of rotor wash on personnel, aircraft, structures and trees are avoided</p> <p>1.6 Compliance is maintained with workplace procedures, approved marshalling signals, and regulatory requirements throughout ground taxiing manoeuvres</p> |
| 2 Perform air taxiing manoeuvres | <p>2.1 Taxi clearance is obtained and compliance is maintained with clearance conditions and requirements, if applicable</p> <p>2.2 With allowance for prevailing conditions, the helicopter is manoeuvred above the ground over a prescribed track at constant height associated with ground effect and maintaining a ground speed that allows the safe transit of a helicopter</p> <p>2.3 Helicopter is maintained within the taxiway limits</p> <p>2.4 Turns in confined spaces are executed without incident</p> <p>2.5 Speed is adjusted to suit helicopter type, surface conditions, congestion, maintenance of control and to avoid collision with obstacles or other aircraft</p> <p>2.6 Adverse effects of rotor wash on personnel, aircraft, structures and trees are avoided</p> <p>2.7 The use of ram air or carburettor heat during air taxiing manoeuvres is avoided in dusty conditions</p> <p>2.8 Compliance is maintained with workplace procedures, approved marshalling signals, and regulatory requirements throughout air taxiing manoeuvres</p> <p>2.9 Throughout taxiing manoeuvres, helicopter operation is kept outside of the 'avoid area' of the manufacturers height-velocity diagram where possible</p> |
| 3 Perform air transiting manoeuvres | <p>3.1 Transit clearance is obtained and compliance is maintained with clearance conditions and requirements, if applicable</p> <p>3.2 With allowance for prevailing conditions, the helicopter is manoeuvred at a height not above 100 feet over a prescribed track within the aerodrome boundaries that is clear of obstacles, and at air speeds greater than those used for air taxiing</p> |

ELEMENT**PERFORMANCE CRITERIA**

- 3.3 Throughout air transit manoeuvres, due awareness is maintained of helicopter operation relative to the manufacturers height-velocity diagram, power required/power available margin, loss of tail rotor effectiveness, traffic movements at the aerodrome and air traffic control requirements
- 3.4 Lookout is maintained using a systematic scan technique at a rate determined by traffic density, visibility and terrain
- 3.5 Surface traffic conditions are recognised and accommodated
- 3.6 Different aircraft types are identified and appropriate adjustments made to transiting operations to accommodate the situation of the identified aircraft
- 3.7 Minimum clearance of half rotor diameter is maintained from obstacles
- 3.8 Adverse effect of rotor wash on other aircraft, facilities and personnel is avoided
- 3.9 Compliance is maintained with right of way procedures
- 3.10 Compliance is maintained with light signals, if applicable
- 3.11 Compliance is maintained with workplace procedures, approved marshalling signals, and regulatory requirements throughout air transit manoeuvres

Required Skills and Knowledge

REQUIRED KNOWLEDGE AND SKILLS

This describes the essential knowledge and skills and their level required for this unit.

Required knowledge:

- Relevant sections of Civil Aviation Safety Regulations and Civil Aviation Orders
- Relevant OH&S and environmental procedures and regulations
- Basic principles of aerodynamics
- Purpose and functions of helicopter systems
- Functions and effects of all helicopter controls
- Aerodrome and helicopter landing site markings and their meanings
- Light and marshalling signals relevant to helicopter operations
- Helicopter braking and steering systems
- Application of the height/velocity diagram/graph
- Causes and effects of ground resonance and related action that should be taken
- Causes and effects of loss of tail rotor effectiveness and related action that should be taken
- Effects of rotor wash and related precautions that should be taken
- Local air traffic control procedures and instructions
- Hazards and risks when taxiing a helicopter and precautions for controlling the risks
- Problems that may occur when taxiing a helicopter and appropriate action that should be taken in each case

Required skills:

- Interpret and apply air traffic control instructions
- Select and use equipment relevant to the taxiing of a helicopter
- Interpret/use a helicopter manufacturers height-velocity diagram/graph
- Use instruments to monitor helicopter performance
- Apply air safety practices and regulations
- Communicate effectively with others when taxiing a helicopter
- Read and interpret instructions, regulations, procedures and other information relevant to taxiing a helicopter
- Interpret and follow operational instructions and prioritise work
- Complete documentation related taxiing a helicopter
- Operate electronic communication equipment to required protocol
- Work collaboratively with others when taxiing a helicopter
- Adapt appropriately to cultural differences in the workplace, including modes of behaviour and interactions with others

REQUIRED KNOWLEDGE AND SKILLS

- Promptly report and/or rectify any identified problems that may occur when taxiing a helicopter in accordance with regulatory requirements and workplace procedures
- Implement contingency plans for unexpected events that may arise when taxiing a helicopter
- Apply precautions and required action to minimise, control or eliminate hazards that may exist when taxiing a helicopter
- Monitor and anticipate operational problems and hazards and take appropriate action
- Monitor work activities in terms of planned schedule
- Modify activities dependent on differing workplace contingencies, situations and environments
- Work systematically with required attention to detail without injury to self or others, or damage to goods or equipment
- Adapt to differences in equipment and operating environment in accordance with standard operating procedures
- Select and use required personal protective equipment conforming to industry and OH&S standards
- Implement OH&S procedures and relevant regulations
- Identify and correctly use equipment required when taxiing a helicopter

Evidence Guide

EVIDENCE GUIDE

The Evidence Guide provides advice on assessment and must be read in conjunction with the performance criteria, required knowledge and skills, the range statement and the assessment guidelines for this Training Package.

Critical aspects for assessment and evidence required to demonstrate competency in this unit

- The evidence required to demonstrate competency in this unit must be relevant to and satisfy all of the requirements of the elements and performance criteria of this unit and include demonstration of applying:
 - the underpinning knowledge and skills
 - relevant legislation and workplace procedures
 - other relevant aspects of the range statement

Context of and specific resources for assessment

- Performance is demonstrated consistently over a period of time and in a suitable range of contexts
- Resources for assessment include:
 - a range of relevant exercises, case studies and/or other simulated practical and knowledge assessment, and/or
 - access to an appropriate range of relevant operational situations in the workplace
 - In both real and simulated environments, access is required to:
 - relevant and appropriate materials and equipment, and
 - applicable documentation including workplace procedures, regulations, codes of practice and operation manuals

Method of assessment

- Assessment of this unit must be undertaken by a registered training organisation
- As a minimum, assessment of knowledge must be conducted through appropriate written/oral tests
- Practical assessment must occur:
 - through activities in an appropriately simulated environment at the registered training organisation, and/or
 - in an appropriate range of situations in the workplace

Range Statement

RANGE STATEMENT

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance.

- | | |
|--|--|
| Tasks may be undertaken in: | <ul style="list-style-type: none"> • variable weather conditions in accordance with Day Visual Flight Rules |
| Performance may be demonstrated in: | <ul style="list-style-type: none"> • single engine helicopter • multi engine helicopter • single main rotor helicopter • multi main rotor helicopter • variable air traffic conditions • variable flight situations • abnormal situations |
| Performance may be demonstrated on an helicopter with: | <ul style="list-style-type: none"> • fully functioning dual controls • an electronic intercom system • dual control brakes • wheeled or skidded undercarriages |
| Crew may include: | <ul style="list-style-type: none"> • single pilot • multi crew |
| Limitations may be imposed by: | <ul style="list-style-type: none"> • local noise abatement requirements and curfews |
| Classes of airspace are: | <ul style="list-style-type: none"> • those designated by the Civil Aviation Safety Authority |
| Checklists may include: | <ul style="list-style-type: none"> • pre-flight • pre-start • engine start • pre-taxi • take-off • after take-off • approach and landing • shutdown • post-flight |
| Taxi procedures may be performed at: | <ul style="list-style-type: none"> • a prepared or unprepared aerodrome • an approved helicopter landing site (HLS) |
| Guidance during taxi operations may be provided by: | <ul style="list-style-type: none"> • air traffic control instructions • light signals • aerodrome markings |
| Operational hazards during taxiing manoeuvres may include: | <ul style="list-style-type: none"> • variable surface conditions • other aircraft • loose objects |

RANGE STATEMENT

- personnel
 - animals
 - birds
 - propeller/tail rotor/rotor wash and jet blast
- Dependent on the type of organisation concerned and the local terminology used, workplace procedures may include:
- company procedures
 - enterprise procedures
 - organisational procedures
 - established procedures
 - standard operating procedures
- Procedures maintaining compliance with airspace requirements are:
- geographical limits of the flight area is demonstrated on a chart
 - prominent geographical features are identified using a chart
 - the limits of the flight area are identified on the ground
 - the position of controlled airspace is determined using a chart and geographical features
 - restricted areas are identified using a chart and geographical features
 - departure from the circuit area and transition to the flight area is completed without incident
 - departure from the flight area and transition to the circuit area is completed without incident
- Information/documents may include:
- relevant sections of Civil Aviation Safety Regulations and Civil Aviation Orders including Day Visual Flight Rules (Day VFR)
 - in Defence context, relevant Defence Orders and Instructions
 - Flight Manual/Pilot's Operating Handbook (POH)
 - Manual of Standards - Pilot Licensing (MOS-PL)
 - Aeronautical Information Publication (AIP)
 - En Route Supplement Australia (ERSA)
 - charts
 - operations manuals
 - approved checklists
 - workplace procedures and instructions and job specification
 - induction and training materials
 - conditions of service, legislation and industrial agreements including workplace agreements and awards
- Applicable regulations and legislation may include:
- relevant Civil Aviation Safety Regulations and Civil Aviation Orders
 - in Defence context, relevant Defence Orders and

RANGE STATEMENT

Performance includes tolerances specified in either of:

Instructions

- relevant state/territory OH&S legislation
- relevant state/territory environmental protection legislation
- relevant Australian Standards
- relevant licence and aircraft rating requirements of the Civil Aviation Safety Authority (CASA) such as:
 - Day VFR Syllabus
 - Manual of Standards
- relevant Defence documentation such as:
 - Defence Orders and Instructions
 - approved curricula and training documentation

Unit Sector(s)

Not applicable.

Competency field**Competency Field**

Y - Aircraft Operation and Traffic Management