



Australian Government

AVIY0023 Launch, control and recover a remotely piloted aircraft

Release: 1

AVIY0023 Launch, control and recover a remotely piloted aircraft

Modification History

Release 1. This is the first release of this unit of competency in the Aviation Training Package.

Application

This unit involves the skills and knowledge required to launch, control and recover a remote pilot aircraft system (RPAS) in compliance with relevant regulatory requirements of the Civil Aviation Safety Authority (CASA) and national operating standards.

It includes conducting pre-launch procedures, maintaining straight and level flight, turning, controlling speed, and landing and recovering.

This unit addresses aviation technical skill requirements (physical, mental and task-management abilities) related to aircraft operational duties of flight crew and ground personnel 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 RPAS 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 Performance criteria describe the performance needed to

outcomes.

demonstrate achievement of the element.

1 Carry out pre-launch procedures

- 1.1** Pre-launch briefing is conducted
- 1.2** Fail-safe checks are undertaken in accordance with relevant operations manual
- 1.3** Air traffic control (ATC) clearances are obtained as required
- 1.4** Approved pre-launch checklists are completed in accordance with relevant operations manual
- 1.5** RPAS is correctly positioned for launch
- 1.6** Airspace is determined as clear for launch

2 Launch RPAS

- 2.1** Launch power is applied and RPAS is maintained, aligned in the launch direction
- 2.2** RPAS is configured for nominated climb profile as required
- 2.3** Situational awareness, lookout and air traffic separation is maintained
- 2.4** Listening watch is maintained in accordance with regulatory requirements
- 2.5** Communication with others as appropriate is undertaken when launching an RPAS
- 2.6** After launch checks are performed in accordance with operational requirements
- 2.7** Situational awareness, lookout and air traffic separation are maintained in all phases of RPAS operation in accordance with regulatory requirements

3 Respond to launch emergencies

- 3.1** Abnormal RPAS operations are identified
- 3.2** Control is maintained to bring RPAS to a safe recovery
- 3.3** Associated emergency procedures are initiated, and checklists and other documentation are completed

4 Climb RPAS

- 4.1** Flight path is observed and risks mitigated in accordance with operational procedures

	4.2	RPAS climb checks are completed in accordance with operational procedures
	4.3	Adjustments are made to attitude and power to achieve safe flight
5	Maintain straight and level flight	
	5.1	Power, altitude and configuration are set to achieve straight and level flight as required
	5.2	Indications of height change are identified and responded to appropriately
	5.3	Indications of heading change are identified and responded to appropriately
	5.4	Flight path is observed and risks mitigated in accordance with operational procedures
6	Turn RPAS in flight	
	6.1	RPAS operating limits are maintained during turns in accordance with manufacturer instructions
	6.3	Potential hazards are identified and controlled during turns
7	Control RPAS speed in flight	
	7.1	Height awareness is maintained during high speed flight
	7.2	Recovery to cruise speed is achieved while maintaining height during flight
8	Descend RPAS	
	8.1	Adjustments are made to altitude and power to achieve descent rates as required
	8.2	RPAS is levelled from a descent position at a nominated altitude for operational requirements
	8.3	Flight path is observed during RPAS descent and risks mitigated in accordance with operational procedures
	8.4	RPAS operating limits are controlled during descent in accordance with manufacturer instructions
	8.5	Descent checks are completed in accordance with operational and regulatory requirements
9	Perform RPAS landing procedure	
	9.1	Landings are conducted in accordance with operations manual procedures appropriate to the RPAS type, with allowance for wind velocity

- 9.2** All mandated checklists are completed
 - 9.3** Traffic conflict is monitored to ensure safe landing
 - 9.4** RPAS is configured for landing in accordance with manufacturer instructions
- 10 Recover RPAS**
 - 10.1** RPAS is recovered at a controlled rate of descent
 - 10.2** Directional control is maintained at all times
 - 10.3** Bouncing of RPAS is minimised appropriately
 - 10.4** RPAS is stopped within the available area
 - 10.5** Post-recovery checks are performed in accordance with approved checklist, manufacturer instructions and operational requirements

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 AVIY3074 Launch remote pilot aircraft systems.

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 AVIY0023 Launch, control and recover a remotely piloted aircraft

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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 launch procedures in accordance with flight manual
- applying precautions and required action to minimise, control or eliminate identified hazards
- applying relevant legislation
- applying the techniques of straight and level, climbing and descending flight
- carrying out correct procedures in a go-around/position hold
- checking and monitoring fail-safe functions
- communicating effectively with others when controlling the remote pilot aircraft systems (RPAS) in normal flight, including using a radio
- communicating effectively with others when recovering RPAS
- complying with air traffic instructions and regulatory requirements
- exercising sound judgment when performing recovery procedures
- identifying and correctly using relevant equipment
- identifying obstructions or other hazards that might hinder a safe launch
- implementing contingency plans
- implementing work health and safety (WHS) procedures and relevant regulations
- interpreting and following operational instructions and prioritising work
- interpreting wind speed and direction
- maintaining compliance with regulatory requirements
- maintaining separation between air traffic
- 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
- monitoring radio as a listening watch
- operating electronic communication equipment to required protocol
- performing various functions simultaneously as required
- reading, interpreting and following relevant regulations, instructions, procedures, information and signs
- remaining within a designated area while complying with air traffic requirements
- reporting and/or rectifying any identified problems promptly in accordance with regulatory

- requirements and workplace procedures
- responding appropriately to cultural differences
- selecting and using required personal protective equipment (PPE) conforming to industry and WHS standards
- using instruments and displays to monitor RPAS performance
- working collaboratively with others when operating the RPAS
- 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:

- aeronautical decision-making processes
- air traffic requirements
- all pre-launch and after-launch checks
- effective communication
- error management, including error types, causes and consequences
- factors affecting directional control of RPAS
- fatigue risk management
- functions and effects of all RPAS controls
- human performance and its limitations, including the senses, memory and situational awareness
- in a Defence context, relevant Defence Orders and Instructions
- launch emergency procedures
- manufacturer specifications for operating a RPAS
- obstacle clearance techniques
- principles of RPAS aerodynamics
- problems that may occur when launching an RPAS and appropriate actions that should be taken in each case
- purpose and functions of RPAS
- relevant sections of Civil Aviation Safety Regulations (CASRs) and Civil Aviation Orders
- relevant WHS and environmental procedures and regulations
- required documentation
- RPAS launch performance
- stress, workload and time pressure management.

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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