



**Australian Government**

# **AVIW0042 Apply remotely piloted aircraft operations and procedures**

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## Modification History

| Release | Comments                                                                                  |
|---------|-------------------------------------------------------------------------------------------|
| 1       | This unit of competency was first released in AVI Aviation Training Package Release 12.0. |

## Application

This unit involves the skills and knowledge required to apply remotely piloted aircraft systems (RPAS) operations and procedures, in compliance with relevant regulatory requirements of the Civil Aviation Safety Authority (CASA) and national operating standards.

It includes preparing for RPAS operations, conducting risk assessments, determining airworthiness of RPAS and using RPAS equipment and sensors. It also includes reporting accidents and incidents and managing abnormal or emergency operations.

This unit incorporates aviation non-technical skill requirements (mental, social and personal-management abilities) related to safety management duties of flight operations 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 as a single operator or within a team environment.

## Licensing/Regulatory Information

Licensing, legislative, regulatory or certification requirements are applicable to this unit.

## Pre-requisite unit(s)

No pre-requisite units

## Competency field(s)

W - Equipment and Systems Operations

## Unit sector(s)

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. |                                                                                                                     |
| <b>1</b>                                  | <b>Prepare for RPAS operations</b>             | <b>1.1</b>                                                                                      | Ensure area of operation is safe and secure for bystanders                                                          |
|                                           |                                                | <b>1.2</b>                                                                                      | Brief crew according to regulatory requirements and workplace procedures                                            |
|                                           |                                                | <b>1.3</b>                                                                                      | Maintain operational, remote pilot and technical logs according to regulatory requirements and workplace procedures |
|                                           |                                                | <b>1.4</b>                                                                                      | Address noise abatement restrictions and environmental considerations                                               |
| <b>2</b>                                  | <b>Conduct job safety assessments</b>          | <b>2.1</b>                                                                                      | Identify hazards, assess risks and implement control measures                                                       |
|                                           |                                                | <b>2.2</b>                                                                                      | Complete job safety assessment for operations according to regulatory requirements and workplace procedures         |
| <b>3</b>                                  | <b>Determine airworthiness of RPAS</b>         | <b>3.1</b>                                                                                      | Determine serviceability of remotely piloted aircraft system for specific operations                                |
|                                           |                                                | <b>3.2</b>                                                                                      | Complete technical logs for remotely piloted aircraft systems                                                       |
|                                           |                                                | <b>3.3</b>                                                                                      | Report defects and unservicabilities of RPAS to relevant personnel                                                  |
| <b>4</b>                                  | <b>Use RPAS equipment and sensors</b>          | <b>4.1</b>                                                                                      | Assess the safety of payloads according to regulatory requirements and workplace procedures                         |
|                                           |                                                | <b>4.2</b>                                                                                      | Assess the impact payloads will have on the RPAS                                                                    |
| <b>5</b>                                  | <b>Report accidents and incidents</b>          | <b>5.1</b>                                                                                      | Identify regulatory requirements for accident and incident reporting                                                |
|                                           |                                                | <b>5.2</b>                                                                                      | Identify and apply relevant regulatory requirements for accidents and incidents                                     |
| <b>6</b>                                  | <b>Manage abnormal or emergency operations</b> | <b>6.1</b>                                                                                      | Maintain control of RPAS at all times                                                                               |

|  |  |            |                                                                                        |
|--|--|------------|----------------------------------------------------------------------------------------|
|  |  | <b>6.2</b> | Implement RPAS abnormal or emergency checklist procedures to maintain safety of flight |
|  |  | <b>6.3</b> | Decide, implement, evaluate and revise course of action to achieve safest outcomes     |
|  |  | <b>6.4</b> | Follow fail-safe procedures in emergency situations                                    |

## Range of conditions

Range is restricted to essential operating conditions and any other variables essential to the work environment.

Refer to the AVI Aviation Companion Volume Implementation Guide for non-essential items for this unit of competency.

# **Assessment Requirements for AVIW0042 Apply remotely piloted aircraft operations and procedures**

## **Performance Evidence**

Evidence required to demonstrate competence in this unit must be relevant to and satisfy all the requirements of the elements and performance criteria on at least one occasion and includes:

- assessing the impact of payloads on RPA
- assessing the safety of payloads
- completing job safety assessments for the operation of an RPA
- conducting inspections of the RPA for serviceability
- conducting risk assessments for area of operations
- determining noise abatement restrictions and environmental considerations
- determining RPAS serviceability for a specific operation
- determining runways in use at aerodromes
- ensuring operational areas are safe and secure for bystanders
- following fail-safe procedures in emergency situations
- reporting accidents and incidents according to workplace procedures
- reporting defects or unserviceability in the RPA
- using RPA technical logs and checklists.

## **Knowledge Evidence**

Evidence required to demonstrate competence in this unit must be relevant to and satisfy all the requirements of the elements and performance criteria and include knowledge of:

- considerations in the event of the following:
  - a control link failure
  - a remote pilot station failure
  - if a fire takes hold on the RPA during flight or on the ground
  - if the RPA is attacked by a bird
- differences and definitions of accidents and incidents
- elements of a job safety assessment for the operation of an RPA
- fail-safe systems and emergency actions of an RPA
- general operational considerations

- limitations imposed by the Part 101 MOS with respect to operations in controlled and non-controlled airspace
- operations of an RPA above 400 feet above ground level (AGL)
- operation of an RPA near an aerodrome
- operations of an RPA using a tether
- remote pilot responsibilities
- RPA considerations including:
  - after an operation has ended
  - in relation to aircraft noise and wildlife
- RPA engine or motor failures in the following circumstances:
  - immediately after launch
  - in a built-up area
  - in the vicinity of bystanders
  - on approach to landing
- RPA technical log
- requirements for accident or incident reporting
- responsibilities of the remote pilot licence holder in relation to the continuing air worthiness of the RPA
- safety and performance implications of various payloads including:
  - cameras
  - other sensors
- strategic risk assessment processes relevant to remotely piloted aircraft 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 it is appropriate to do so; where this is not appropriate, assessment must occur in simulated workplace operational situations that replicate 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
- applicable documentation, including workplace procedures, regulations, codes of practice and operation manuals
- relevant materials, tools, equipment and PPE currently used in industry.

## Mandatory Workplace Requirements

Assessment of performance evidence may be in a workplace setting or an environment that accurately represents a real workplace.

## Unit Mapping Information

| Previous Code and Title | Equivalence   | Comments                                                                                                                         |
|-------------------------|---------------|----------------------------------------------------------------------------------------------------------------------------------|
|                         | Newly created | This unit has been created to address a skill or task required by industry that is not covered by an existing unit of competency |

## Links

Companion volumes, including implementation guides, are found on the national training register - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=4725260a-0af3-4daf-912b-ef1c2f3e5816>.