



Australian Government

AVIY3077 Manage remote pilot aircraft systems in abnormal flight situations

Release: 1

AVIY3077 Manage remote pilot aircraft systems in abnormal flight situations

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 manage remote pilot aircraft systems (RPAS) in abnormal flight situations, in compliance with relevant regulatory requirements of the Civil Aviation Safety Authority and national operating standards.

It includes managing loss of thrust after take-off, performing forced recovery following loss of thrust, and recognising and recovering from stall. It also includes recognising and recovering from an incipient spin, conducting precautionary search and recovery, and managing RPAS abnormal and emergency situations.

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.

Use for Defence Aviation is to be in accordance with relevant Defence Orders, Instructions, Publications and Regulations.

Pre-requisite Unit

Not applicable.

Competency Field

Y – Aircraft Operation and Traffic Management

Unit Sector

Not applicable.

Elements and Performance Criteria

ELEMENTS

Elements describe the essential outcomes.

1 Manage loss of thrust after take-off

2 Perform forced recovery following loss of thrust

3 Recognise and recover from stall

PERFORMANCE CRITERIA

Performance criteria describe the performance needed to demonstrate achievement of the element.

- 1.1 Loss of thrust is identified as an abnormal situation
- 1.2 RPAS is controlled at all times in accordance with workplace procedures
- 1.3 Immediate recovery actions are performed in accordance with aircraft flight manual (AFM) and pilot's operating handbook (POH)
- 1.4 A recovery area within gliding distance is selected, and emergency procedures are performed in accordance with AFM/POH
- 1.5 Appropriate flight profile is flown to enable controlled recovery
- 1.6 Controlled recovery is achieved in accordance with workplace procedures
- 2.1 Control of RPAS is maintained at all times
- 2.2 Immediate actions are performed in accordance with AFM/POH
- 2.3 A recovery area within gliding distance is selected and RPAS is manoeuvred to nominated recovery area as required
- 2.4 Consideration is given to restarting the engine and engine is restarted as required
- 2.5 Flight profile is flown from that a controlled recovery can be achieved
- 2.6 Controlled recovery is achieved in accordance with workplace procedures
- 3.1 Stall signs and symptoms are recognised
- 3.2 Height loss, consistent with RPAS type, is identified
- 3.3 RPAS altitude and power settings are adjusted to resume normal flight on advent of stall

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| 4 Recognise and recover from an incipient spin | 4.1 | Incipient spin signs and symptoms are recognised |
| | 4.2 | Recovery at incipient spin stage is performed and controlled flight is resumed |
| | 4.3 | Recovery at incipient spin stage during a turn is performed and controlled flight is resumed |
| 5 Conduct precautionary search and recovery | 5.1 | Search and recovery intentions are communicated to RPAS crew |
| | 5.2 | Aircraft is configured for appropriate inspection flight profile |
| | 5.3 | Recovery area is selected and inspected for suitability of safe approach, recovery distance, surface and obstacle clearance |
| 6 Manage RPAS abnormal and emergency situations | 6.1 | Abnormal and emergency situations are identified, and managed in accordance with relevant emergency procedures and regulatory requirements |
| | 6.2 | Appropriate emergency procedures are followed in accordance with AFM/POH and published procedures while maintaining control of the RPAS |
| | 6.3 | Control of RPAS is maintained at all times |

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.

Abnormal situations must include one or more of the following:

- engine failure at take-off
- engine failure during flight
- forced landing
- incipient spin
- RPAS abnormal operational situations involving equipment, instruments, control, airframe, fire or other emergency stall

Unit Mapping Information

This unit replaces and is equivalent to AVIY3077A Manage remote pilot aircraft systems (RPAS) in abnormal flight situations.

Links

Companion Volume implementation guides are found in VETNet -

<https://vetnet.education.gov.au/Pages/TrainingDocs.aspx?q=4725260a-0af3-4daf-912b-ef1c2f3e5816>