



**Australian Government**

# **AVIY0046 Execute advanced aeroplane manoeuvres and procedures**

**Release: 1**

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## **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 execute advanced aeroplane manoeuvres and procedures in compliance with relevant regulatory requirements of the Civil Aviation Safety Authority (CASA) and national operating standards.

It includes turning the aeroplane steeply, sideslipping, and executing short take-off and landing procedures. It also includes entering and recovering from stall conditions and recovering from an incipient spin.

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 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 outcomes.

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

#### 1 Turn aeroplane steeply

- 1.1 Pre-manoeuve checks for steep turning are performed
- 1.2 Flightpath is cleared before and during turn
- 1.3 Steep level turn of nominated bank angle is achieved without altitude change to nominated heading
- 1.4 Descending turn of nominated bank angle is achieved to nominated heading
- 1.5 Awareness of higher stall speed in turns is applied
- 1.6 Aeroplane operating limits are not exceeded

#### 2 Sideslip aeroplane

- 2.1 Yaw is induced to achieve increased rate of descent while maintaining track and airspeed
- 2.2 Recovery from sideslip is achieved and aeroplane is returned to balanced flight
- 2.3 Flightpath is cleared before and during manoeuvre
- 2.4 Glide speed is maintained

#### 3 Execute short take-off

- 3.1 Take-off performance is calculated in accordance with performance chart
- 3.2 Pre-take-off, line-up and after take-off checks are performed in accordance with approved checklist and regulatory requirements
- 3.3 Aeroplane is lined up to enable use of maximum runway length
- 3.4 Short take-off technique is applied in accordance with aircraft flight manual (AFM)/pilot's operating handbook (POH) requirements
- 3.5 Separation with other traffic is maintained
- 3.6 Appropriate allowance is made for surface and wind conditions

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|---------------------------------------|------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>4 Execute short landing</b>        | <b>4.1</b> | Landing performance is calculated in accordance with performance chart                                                                                                                                                                          |
|                                       | <b>4.2</b> | Aeroplane is landed at nominated touchdown point using appropriate techniques and procedures in accordance with AFM/POH requirements                                                                                                            |
|                                       | <b>4.3</b> | Separation with other traffic is maintained                                                                                                                                                                                                     |
|                                       | <b>4.4</b> | Appropriate allowance is made for surface and wind conditions                                                                                                                                                                                   |
|                                       | <b>4.5</b> | After-landing checks are performed in accordance with approved checklist and regulatory requirements                                                                                                                                            |
| <b>5 Enter and recover from stall</b> | <b>5.1</b> | Pre-manoevre checks for stalling are performed                                                                                                                                                                                                  |
|                                       | <b>5.2</b> | Stall signs and symptoms are recognised                                                                                                                                                                                                         |
|                                       | <b>5.3</b> | Aeroplane is controlled by applying required pitch, roll and yaw inputs as appropriate in a smooth, coordinated manner, and aeroplane is accurately trimmed to enter and recover from stall conditions                                          |
|                                       | <b>5.4</b> | Stall recovery in simulated partial and complete engine failure configurations is initiated and completed using established stall recovery techniques                                                                                           |
| <b>6 Recover from incipient spin</b>  | <b>6.1</b> | Pre-manoevre checks for an incipient spin are performed                                                                                                                                                                                         |
|                                       | <b>6.2</b> | Incipient spin signs and symptoms are recognised                                                                                                                                                                                                |
|                                       | <b>6.3</b> | Aeroplane is controlled during spin manoeuvres by applying required pitch, roll and yaw inputs as appropriate in a smooth, coordinated manner, to enter and recover from spin conditions during straight and level flight, climbing and turning |
|                                       | <b>6.4</b> | Spin recovery is initiated and completed using established incipient spin recovery techniques                                                                                                                                                   |

## 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 equivalent to AVIY0018 Execute advanced aeroplane manoeuvres and procedures.

## 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>