



**Australian Government**

# **AVIY0001 Operate aircraft using aircraft flight instruments**

**Release: 1**

# **AVIY0001 Operate aircraft using aircraft flight instruments**

## **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 operate aircraft using aircraft flight instruments, in compliance with relevant regulatory requirements of the Civil Aviation Safety Authority (CASA) and national operating standards.

It includes establishing serviceability of flight instruments and instrument power sources, operating an aircraft using full instrument procedures and recovering from unusual attitudes using full instrument procedures. It also includes operating an aircraft using limited instrument procedures, recovering from unusual attitudes using limited instrument procedures, re-establishing visual flight, and performing steep turns.

This unit addresses aviation technical skill requirements (physical, mental and task-management abilities) related to aircraft operational duties that complement flight crew non-technical skills, and contributes to safe and effective performance in complex aviation operational environments.

Operations are conducted as part of 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.

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.

### PERFORMANCE CRITERIA

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

- |  |   |
|--|---|
| <b>1 Establish serviceability of flight instruments and instrument power sources</b> | 1.1 Serviceability of flight instrument, pitot/static system and instrument power sources is determined before flight<br>1.2 Functional checks of flight and navigational instruments are performed before departure  |
| <b>2 Operate aircraft using full instrument procedures</b>                           | 2.1 Flight instrument and instrument power sources are monitored and pilot cautions, warnings and indications are reacted to in accordance with full instrument procedures<br>2.2 Power and attitude are set and maintained by reference to full instrument panel to achieve straight and level performance during normal cruise<br>2.3 Power and attitude are set and maintained by reference to full instrument panel to achieve nominated climb performance<br>2.4 Power and attitude are set and maintained by reference to full instrument panel to achieve nominated descent performance<br>2.5 Power, attitude and bank during climb, descent and straight and level flight are set and maintained by reference to full instrument panel to achieve rate one turns onto a nominated heading<br>2.6 Aircraft is balanced and trimmed to maintain nominated aircraft altitude, heading, speed and/or climb/descent performance within flight tolerances<br>2.7 Aircraft is levelled at nominated altitude, from climb or descent during straight or turning flight |
| <b>3 Recover from unusual attitudes using full instrument procedures</b>             | 3.1 Unusual attitudes and upset situations are recognised and identified<br>3.2 Controlled flight is resumed by reference to flight instruments using a full instrument panel<br>3.3 Straight and level attitude is achieved without excessive oscillations at the horizon<br>3.4 Aircraft is recovered to above lowest safe altitude (LSALT)   |

- 4 Operate aircraft using limited instrument procedures**
- 4.1 Flight instrument and instrument power sources are monitored and pilot cautions, warnings and indications are reacted to in accordance with limited instrument procedures
  - 4.2 Aircraft is transitioned from full instrument operating procedures to limited instrument operating procedures while maintaining safe flight profiles
  - 4.3 Power and attitude are set and maintained by reference to limited instrument panel to achieve straight and level performance during normal cruise
  - 4.4 Power and attitude are set and maintained by reference to limited instrument panel to achieve nominated climb performance
  - 4.5 Power and attitude are set and maintained by reference to limited instrument panel to achieve nominated descent performance
  - 4.6 Power, attitude and bank during climb, descent, straight and level flight are set and maintained by reference to limited instrument panel to achieve rate one turns onto a nominated heading
  - 4.7 Aircraft is balanced and trimmed to maintain nominated aircraft altitude, heading, speed and/or climb/descent performance within flight tolerances
  - 4.8 Aircraft is levelled at nominated altitude, from climb or descent during straight or turning flight
- 5 Recover from unusual attitudes using limited instrument procedures**
- 5.1 Unusual attitudes and upset situations are recognised and identified
  - 5.2 Controlled flight is resumed by reference to flight instruments using a limited instrument panel
  - 5.3 Straight and level attitude is achieved without excessive oscillations at the horizon
  - 5.4 Aircraft is recovered to above LSALT
- 6 Re-establish visual flight**
- 6.1 Aircraft is transitioned from visual flight conditions to instrument flight conditions while aircraft control is maintained
  - 6.2 Aircraft is manoeuvred to re-establish visual flight

- 6.3 Plan is implemented to ensure flight continues within visual meteorological conditions (VMC)
- 7 Perform steep turns**
- 7.1 Power, attitude and bank are set to maintain level flight by reference to full instrument panel that achieves a steep turn
- 7.2 Nominated angle of bank is maintained
- 7.3 Aircraft turn is exited onto nominated heading
- 7.4 Aircraft is balanced and trimmed to maintain nominated aircraft altitude, heading, speed and/or climb/descent performance within flight tolerances

## 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.

- Aircraft must include one or more of the following:
- fixed wing
  - helicopter
  - other commercial or military aircraft
- Unusual attitudes and upset situations must include:
- high and low-nose attitudes
  - unbalanced flight
  - various power settings
  - various aircraft configurations
  - varying angles of bank

## Unit Mapping Information

This unit replaces but is not equivalent to:

- AVIY5020A Conduct full instrument panel manoeuvres
- AVIY5021A Conduct limited instrument panel manoeuvres.

## Links

Companion Volume implementation guides are found in VETNet -

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