



Australian Government

AVIY0038 Operate aeroplane at low level

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 operate an aeroplane at low level in compliance with relevant regulatory requirements of the Civil Aviation Safety Authority (CASA) and national operating standards.

It includes planning low-level flight operations, operating aeroplane safely during low-level flight operations, and manoeuvring aeroplane at low-level. It also includes undertaking low-level, straight and level flight, executing low-level turns, executing simulated forced landing from below 500 feet above ground level (AGL), and operating at low level in hilly terrain.

This unit addresses aviation technical skill requirements (physical, mental and task-management abilities) related to aircraft operational duties of flight crew 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 Plan low-level flight operations

- 1.1** Low-level flight hazards are identified, evaluated and treated in accordance with aviation risk management processes
- 1.2** Task requirements are confirmed through consultation with stakeholders involved in low-level operations
- 1.3** Aeroplane type and performance capability are confirmed as appropriate for task
- 1.4** Effects of fatigue and physical health on pilot performance are assessed and allowed for when planning low-level operations
- 1.5** Actual and forecast weather conditions are analysed and applied to low-level operations
- 1.6** Area of operations is identified using chart and geographical features
- 1.7** Geographical characteristics of area of flying operations are assessed to ensure safe completion of task
- 1.8** Location of ground support personnel is confirmed
- 1.9** Appropriate reconnaissance and pre-manoeuve or other relevant checks are conducted prior to descending below 500 feet AGL

2 Operate aeroplane safely during low-level flight operations

- 2.1** Pre-flight inspections are performed and aircraft serviceability determined prior to flight
- 2.2** Navigation systems are initialised and data validity checks conducted
- 2.3** Aeroplane is operated correctly and safely in accordance with aircraft operating requirements
- 2.4** Aeroplane take-off is conducted within authorised operational conditions and limitations

3 Manoeuvre aeroplane at low level

- 3.1** Low-level flight manoeuvres are performed safely using pre-planned manoeuvres at planned altitudes
- 3.2** Effects of wind velocity, false horizons, rising ground and mountainous terrain are managed and control of

aeroplane correctly maintained

- 3.3 Pilot's visual attention is focused outside the cockpit
- 3.4 Lookout is maintained using a systematic scan technique at a rate determined by traffic density, visibility and/or terrain
- 3.5 Natural horizon is used as primary attitude reference
- 3.6 Nose of aircraft is cleared to ensure forward visibility when appropriate
- 3.7 Situational awareness is maintained at all times during low-level manoeuvres
- 3.8 Aeroplane is safely manoeuvred adjacent to power lines and wires
- 3.9 Obstacles are identified and are appropriately and safely avoided
- 3.10 Personnel, animals, vehicles and buildings are identified and are appropriately and safely avoided
- 3.11 Height is maintained by visual reference to the earth's surface when below 500 AGL
- 3.12 Weather conditions are monitored and appropriate responses made
- 3.13 Fuel status is monitored and appropriate responses made
- 3.14 Local and published noise abatement requirements and curfews are observed

4 Undertake low-level, straight and level flight

- 4.1 Aircraft energy state and inertia is managed to maintain safe low-level flight
- 4.2 Wind velocity is estimated and is appropriately taken into account during low-level manoeuvres
- 4.3 Height is adjusted and effects of rising and descending terrain are considered during low level, straight and level flight
- 4.4 Aircraft drift is recognised and compensated for during low-level flight
- 4.5 Obstructions are identified and are appropriately and

- safely avoided
- 5 Execute low-level turns**
- 5.1** Aeroplane is turned at normal cruise speed at angles of bank up to 60 degrees (45 degrees for multi-engine aircraft)
- 5.2** Clearance scan is performed prior to manoeuvre commencement
- 5.3** Power is adjusted to maintain required height over terrain
- 5.4** Effects of flight over water or featureless terrain are managed
- 5.5** Height is adjusted and effects of rising and descending terrain are considered during low-level turns
- 5.6** Effects of gradient wind are compensated for and rollout is anticipated to complete low-level turn
- 6 Execute simulated forced landing from below 500 feet AGL**
- 6.1** Emergency situations requiring a forced landing are identified
- 6.2** Immediate actions are performed in accordance with aircraft flight manual (AFM) and/or pilot's operating handbook (POH)
- 6.3** Aircraft control is maintained during simulated aircraft forced landing
- 6.4** Landing area within safe emergency flight distance is selected and appropriate action plan formulated
- 6.5** Emergency procedures are performed in accordance with AFM/POH and established action plan
- 6.6** Air traffic service and other traffic are advised of intentions during emergency
- 6.7** Aeroplane is landed in accordance with the AFM/POH and established action plan
- 7 Operate at low level in hilly terrain**
- 7.1** Aeroplane is safely manipulated at low level in hilly terrain
- 7.2** Safe operating heights relevant to low-level flight operation type are established and maintained

- 7.3 Safe contour flying techniques are applied
- 7.4 Appropriate natural markers to aid situational awareness are identified and selected
- 7.5 Safe approaches to higher ground, including identification of escape routes, are used during low-level flight operations
- 7.6 Safe turns in hilly terrain are conducted in accordance with accepted flight handling techniques
- 7.7 Situational awareness of effects of wind and turbulence in hilly terrain, including lee effects, is maintained and managed during low-level flight operations
- 7.8 Situational awareness of illusions in hilly terrain, including false horizon effect and shadows, are maintained and managed during low-level flight operations

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 AVIY0006 Operate aeroplane at low level.

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>