Australian Government

Assessment Requirements for AVIY0006 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.

Performance Evidence

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

- adapting to differences in equipment and operating environment in accordance with standard operating procedures
- applying correct navigation techniques and procedures at low level
- applying knowledge about wind effect in the vicinity of obstructions, mountainous terrain and illusions
- applying knowledge of the effect of false horizons
- applying relevant aeroplane aeronautical knowledge
- applying relevant legislation and workplace procedures
- applying safe contour flying handling techniques
- communicating effectively with others
- completing relevant documentation
- complying with airspace requirements and low-level flight procedures
- conducting procedure turns from a fixed ground reference point and compensating for effect of gradient wind
- establishing and maintaining safe height relevant to low level flight type
- flying at various speed and configurations not below calculated stall speed +15 knots indicated air speed (KIAS) or safe single-engine speed +15 KIAS (for multi-engine aeroplanes)
- identifying and correctly using required equipment
- identifying and justifying a decision to operate aeroplane at low level
- identifying and maintaining a safe distance from pole stay wires
- implementing aviation risk management processes and required action to minimise, control or eliminate identified hazards
- implementing contingency plans
- implementing work health safety (WHS)/occupational health and safety (OHS) procedures and relevant regulations
- interpreting and following operational instructions and prioritising work
- maintaining awareness and managing effects of wind and turbulence in hilly terrain, including lee effects
- managing energy state of aircraft:

  - identifying high kinetic energy situations
  - identifying low kinetic energy situations
  - identifying high potential energy situations
  - identifying low potential energy situations
- modifying activities depending on workplace contingencies, situations and environments
- monitoring and anticipating operational problems and hazards and taking appropriate action
- monitoring work activities in terms of planned schedule
- navigating to a predetermined destination at a height below 500 feet AGL
- operating electronic communications equipment to required protocol
- performing pre-flight inspection and determining aircraft serviceability for intended low level flight
- reading, interpreting and following relevant regulations, instructions, procedures, information and signs
- recognising and controlling the illusion of slipping and skidding during turns close to the ground
- recognising and managing the impact of sun glare on increased risk of collision with obstacles
- reporting and/or rectifying identified problems promptly, in accordance with regulatory requirements and workplace procedures
- responding appropriately to wind effect in the vicinity of obstructions, mountainous terrain and illusions
- selecting and using required personal protective equipment conforming to industry and work health and safety (WHS)/occupational health and safety (OHS) standards
- setting local or area barometric pressure adjusted for sea level (QNH) at appropriate stages of flight
- solving identified problems
- using relevant instruments to monitor aeroplane performance
- working collaboratively with others
- working systematically with required attention to detail without injury to self or others, or damage to goods or equipment.

Knowledge Evidence

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

- aeroplane type limitations applicable to low-level flight
- CASR Part 61 Manual of Standards Schedule 3 Aeronautical Knowledge relevant to low level aeroplane operations
- dangers associated with ‘out of balance’ low-level flight manoeuvres

- flight rules:
  - privileges and limitations of a low-level rating
  - provisions of 157 of Civil Aviation Regulations (CAR) 1988
  - requirements for flight and pilot responsibilities for flight below 500 feet AGL
- human factors applicable to low-level flight operations:
  - human factors issues and their impact on the safety of low-level flight operations
  - dehydration and its impact on pilot cognitive function and reaction time
  - fatigue and its impact on pilot cognitive function and situational awareness
  - stress and its short-term and long-term impact
  - drugs (including over the counter) and their impact on pilot cognitive function, reaction time and coordination
  - spatial disorientation and illusions
- legislative restrictions applicable to low flying
- local air traffic control procedures and instructions
- low-level flight operational techniques:
  - methods of managing the following factors:
    - wind direction
    - sun glare
    - obstructions, including wires and power lines
  - identifying wire runs and treating/minimising associated risks:
    - preliminary inspection of treatment area
    - how to judge distance to the wire
    - danger and forms of distraction
    - considerations for flying above or under the wire
    - considerations for crossing oblique wires
    - visual cues of wire locations such as pole runs, type, numbers and attitude
    - insulators, cross-stress and angle of cross-stress, supplementary or spur wires, buildings
    - characteristics and dangers of high wires and guy wires
    - factors affecting misjudgement of wire clearance
    - how to maintain awareness of located wires
    - hazards of mental overload
  - operation of differential global navigation satellite systems (DGNSS for track guidance, including the importance of maintaining an active scan outside the cockpit while referencing the DGNSS
- maximum rate turns and minimum radius turn criteria
- meteorological factors affecting aeroplane flight performance during low-level flight:
  - effects of inversion on low-level flight
  - indicators of mechanical and thermal turbulence and shifting wind and implications for low-level operations
  - winds affecting low-level flying and associated flying conditions

- effect of mountainous influence on airflow and associated flying conditions
- weather phenomena hazardous to low-level operations
- terrain and weather conditions that may lead to disorientation during low-level flight:
  - flight into rising ground and toward low ground
  - false horizons
  - ridgeline and valley effects
  - pilot corrective actions
- typical terrain and seasonal effects on local wind direction, strength and mechanical or thermal turbulence

- minimum height for low-level flight by an aircraft over a city, town or populous area
- minimum lateral and vertical distances that an aircraft must avoid persons, vessels, vehicles, structures or livestock over a sparsely populated area
- operations on, or in vicinity of, non-controlled and controlled aerodromes or airstrips:
  - restrictions and conditions on low-level operations at aerodromes with movements of regular public transport aircraft
  - circuit requirements at various types of aerodromes and aircraft landing areas (ALAs), including conditions applying to exemption from compliance with Civil Aviation Safety Authority (CASA) published procedures
  - aerial inspection methods and purpose
  - location of and planning for obstacle management and ground undulations
- operational planning:
  - flight planning and risk management:
    - aviation risk management processes
    - low- level flight hazards and controls applicable to
      - hilly terrain
      - downdraughts
      - turbulence
      - false horizon effect
      - high country
      - irregular areas
  - pre-flight and after flight inspections:
    - aircraft safety criteria
    - inspections and flight preparation
  - operational inspections:
    - operating area inspection methods and purpose
    - limitations of ground inspections
    - low-flying restrictions, planning notice, precautions and procedures with respect to overflying or in close proximity to buildings during low-level flight operations, including stating the required safety distances and minimum height from buildings
- problems that may occur when operating an aeroplane at low level and appropriate action that should be taken in each case

- relevant WHS/OHS and environmental procedures and regulations
- relevant sections of Civil Aviation Safety Regulations and Civil Aviation Orders
- unintended incipient spinning inducement and pilot corrective actions.

Assessment Conditions

As a minimum, assessors must satisfy applicable regulatory requirements, which include requirements in the *Standards for Registered Training Organisations* current at the time of assessment.

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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.

Assessment must occur in workplace operational situations. Where this is not appropriate, assessment must occur in simulated workplace operational situations that reflect workplace conditions.

Resources for assessment must include access to:

- a range of relevant exercises, case studies and/or simulations
- acceptable means of simulation assessment
- applicable documentation including workplace procedures, regulations, codes of practice and operation manuals
- relevant materials, tools, equipment and personal protective equipment currently used in industry.

Links

Companion Volume implementation guides are found in VETNet - https://vetnet.education.gov.au/Pages/TrainingDocs.aspx?q=4725260a-0af3-4daf-912b-ef1c2f3e5816