



Australian Government

AVIY0013 Conduct a 2D instrument approach

Release: 1

AVIY0013 Conduct a 2D instrument approach

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 conduct a 2D instrument approach, in compliance with relevant regulatory requirements of the Civil Aviation Safety Authority and national operating standards.

It includes preparing for an approach, conducting the initial approach and conducting a holding pattern. It also includes conducting an approach and conducting a missed approach.

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 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 Operations 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 Prepare for approach	1.1 Latest available information for destination is reviewed 1.2 Navigation system validity check is conducted as required 1.3 Receiver autonomous integrity monitoring (RAIM) check is conducted as required 1.4 Flight plan is selected, loaded, checked and activated as required 1.5 Current approach chart for the approach to be flown is selected and briefed to flight crew 1.6 Navigation aid required for approach is checked and confirmed as serviceable
2 Conduct initial approach	2.1 Altimeter QNH is set correctly 2.2 Aircraft is manoeuvred to holding fix
3 Conduct a holding pattern	3.1 Holding pattern is entered and performed from holding fix 3.2 Aircraft is flown in accordance with relevant approach procedure requirements
4 Conduct an approach	4.1 Altimeter QNH is updated and set 4.2 Automation is used appropriately 4.3 Approach is performed correctly and within published tolerances 4.4 Navigation aid signal integrity is monitored during approach 4.5 Aircraft is flown to a stabilised descent profile from final approach fix to minima 4.6 Visual reference is established and a visual circling or runway approach is conducted for a landing on the selected runway
5 Conduct a missed approach	5.1 Missed approach conditions are recognised and missed approach is initiated 5.2 Aircraft is manoeuvred to missed approach point (MAPt) 5.3 Missed approach procedure is conducted in accordance with

the instrument approach and landing (IAL) chart

- 5.4 Obstacle clearance in instrument meteorological conditions (IMC) or simulated IMC is maintained

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.

- 2D instrument approach must include one or more of the following:
- non-directional beacon (2D)
 - VHF omnidirectional range (VOR) and localiser (LOC)
 - distance measuring equipment (DME)/global navigation satellite system (GNSS) arrival (DGA)
 - required navigation performance RNP-LNAV (RNAV/GNSS) and RNP-LP (wide area augmentation system [WAAS]) as required

Unit Mapping Information

No equivalent unit.

Links

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

Assessment Requirements for AVIY0013 Conduct a 2D instrument approach

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Performance Evidence

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

- adapting to differences in equipment and operating environment in accordance with standard operating procedures
- applying precautions and required action to minimise, control or eliminate identified hazards
- applying relevant aeronautical knowledge
- applying relevant legislation and workplace procedures
- communicating effectively with others
- completing relevant documentation
- determining 2D approach procedure applicable minima for aircraft
- determining conditions permitting descent below minima
- identifying and correctly using relevant equipment
- implementing contingency plans
- implementing work health and safety (WHS)/occupational health and safety (OHS) procedures and relevant regulations
- interpreting 2D instrument approach procedure chart
- interpreting and following operational instructions and prioritising workload
- modifying activities depending on workplace contingencies, situations and environments
- monitoring aid signal integrity
- monitoring and anticipating operational problems and hazards and taking appropriate action
- monitoring work activities in terms of planned schedule
- operating electronic communications equipment to required protocol
- performing systematic scan techniques
- reading, interpreting and following relevant regulations, instructions, procedures, information and signs
- reporting and/or rectifying identified problems promptly, in accordance with regulatory requirements and workplace procedures
- selecting and using required personal protective clothing and equipment conforming to industry and WHS/OHS standards
- selecting approach and determining applicable minima
- setting local or area barometric pressure adjusted for sea level (QNH) at appropriate stages of flight

- working collaboratively with others.

Knowledge Evidence

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

- abnormal operations and emergency procedures for an approach, including navigation aid failure
- CASR Part 61 Manual of Standards Schedule 3 Aeronautical Knowledge relevant to instrument flight operations
- cause and magnitude of typical global navigation satellite system (GNSS) errors
- conditions required to transition to and operate in that mode of operation for the GNSS/non-precision approach (NPA) and the associated course deviation indicator (CDI) sensitivity and receiver autonomous integrity monitoring (RAIM) protection provided
- effect of each type of RAIM prediction on operational requirements
- effects of availability or otherwise of barometric altimeter-aiding on RAIM availability and prediction
- effects of satellite unserviceability on reliability of each type of prediction
- factors that adversely affect the conduct of a GNSS/NPA, and suitable pilot procedures to minimise such effects
- GNSS operating procedures for navigation tasks
- GNSS operational and serviceability checks
- GNSS system fundamentals and principles of operations
- GNSS warnings and messages
- human factors limitations associated with using GNSS equipment
- instrument approach procedures and limitations
- loss of radio communication during an approach procedure
- minimum obstacle clearance criteria during approach procedure and missed approach procedure
- missed approach procedure for an approach
- mode of operation required during each segment of a GNSS/ NPA
- operating procedures for GNSS equipment that reduce or eliminate errors
- operating procedures that provide safeguards against GNSS navigational errors
- operational requirements that apply to planning a flight on the basis of conducting a RNAV (GNSS) procedure at the destination
- parameters applicable to RAIM warnings in enroute, terminal and approach modes
- prediction limitations that apply to availability of approach RAIM at the destination or alternate aerodrome
- procedure for joining the circuit from an approach procedure
- radio procedures during an approach

- requirements applicable to pilots and equipment for GNSS operations
- sector entry join procedures for entering a holding pattern
- tracking tolerance and altitude limitations for flying the published approach procedure
- tracking tolerances, automatic way-point sequencing, CDI sensitivity and RAIM availability parameters for entry, RAIM availability and approach segments.

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.

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