



Australian Government

Department of Education, Employment and Workplace Relations

AVIY5037A Perform distance measuring equipment (DME)/global positioning system (GPS) arrival

Release: 1

AVIY5037A Perform distance measuring equipment (DME)_global positioning system (GPS) arrival

Modification History

Not applicable.

Unit Descriptor

Unit Descriptor

This unit involves the skills and knowledge required to conduct a DME or GPS Arrival procedure from the Lowest Safe Altitude (LSALT), within a specified sector or on a specified track. This includes descending not below the distance/altitude descent steps specified for the procedure to the Minimum Descent Altitude (MDA) applicable to the aircraft category; conducting a published missed approach if visual reference is not achieved by the Missed Approach Point (MAPt); using Non-directional Beacon (NDB) or VHF Omni-directional Radio Range (VOR) for tracking and DME or GPS to provide distance indications. Licensing, legislative, regulatory or certification requirements are applicable to this unit.

Application of the Unit

Application of the Unit

Work must be carried out in compliance with the relevant licence and aircraft rating requirements of the Civil Aviation Safety Authority (CASA); relevant airspace control requirements and Instrument Flight Rules (IFR); and aircraft control principles, regulations, safety codes, protocols and procedures relevant to perform distance measuring equipment (DME)/global positioning system (GPS) Arrival as part of commercial aircraft activities. Use for ADF Aviation is to be in accordance with relevant Defence Orders and Instructions and applicable CASA compliance. Operations are conducted across a variety of operational contexts within the Australian aviation industry. Work is performed under limited supervision. This unit of competency is packaged at AQF V.

Licensing/Regulatory Information

Not applicable.

Pre-Requisites

Not applicable.

Employability Skills Information

Employability Skills This unit contains employability skills.

Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.

Performance criteria describe the required performance needed to demonstrate achievement of the element. Assessment of performance is to be consistent with the evidence guide.

Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1Select and prepare for approach	1.1 The current Instrument Approach and Landing (IAL) chart for the DME/GPS approach to be flown is selected 1.2 The instrument approach and missed approach procedure is planned 1.3 MDA is determined 1.4 Sector entry to the approach and holding pattern is selected, reviewed and briefed as appropriate 1.5 Minimum altitude, LSALT or Minimum Safe Altitude (MSA) prior to approach entry is reviewed and briefed in relation to tracks, distances and descent limitations 1.6 The applicable approach minima for the aircraft performance category and runway to be used is selected 1.7 The holding or diversion action if visual reference is not established is reviewed and briefed 1.8 Fuel availability and latest divert time is selected if required 1.9 Altimeter is set to appropriate QNH
2Use appropriate tracking aid and distance information and monitor aid signal integrity	2.1 DME is tuned and identified 2.2 The reference Way-point (WPT) for GPS to be used for tracking inbound is selected 2.3 The distance indication is checked 2.4 Approach aid is monitored throughout the approach to ensure signal integrity 2.5 DME or GPS is used to provide distance indications for descent via the distance/altitude steps of the approach 2.6 Availability of receiver autonomous integrity monitoring (RAIM) is ensured before descending below LSALT or MSA
3Conduct approach procedure	3.1 Initial approach is conducted not below the specified limiting altitude for the distance/altitude descent steps 3.2 Arrival procedure is conducted while descending on the specified track or sector in accordance with AIP 3.3 Landing runway is identified 3.4 Runway or circling approach for a landing is conducted after visual reference is established
4Conduct missed approach procedure	4.1 Conditions requiring a missed approach are recognised and missed approach is initiated 4.2 Aircraft is manoeuvred to Missed Approach Point (MAPt) 4.3 Missed approach procedure is conducted in accordance with the IAL chart 4.4 Obstacle clearance in IMC/simulated IMC is maintained

Required Skills and Knowledge

REQUIRED KNOWLEDGE AND SKILLS

This describes the essential knowledge and skills and their level required for this unit.

Required knowledge:

- DME or GPS Arrival procedures and limitations in all classes of airspace
- Pilot's responsibilities when DME or GPS Arrival is conducted outside controlled airspace
- Conditions and limitations for manoeuvring within a DME or GPS Arrival sector
- Procedure for joining the circuit from a DME or GPS Arrival
- DME or GPS Arrival missed approach
- Minimum obstacle clearance criteria during a DME or GPS Arrival missed approach procedure
- Radio procedures during a DME or GPS Arrival
- Loss of radio communication during a DME or GPS Arrival procedure
- Abnormal operations and/or emergencies during a DME or GPS Arrival, including navigation aid failure, loss of GPS RAIM, GPS RAIM warning, and disparity between VOR/NDB track and GPS track indication
- Operation of electronic communications equipment
- Requirements for completing relevant documentation
- Code of practice for working collaboratively with others
- Steps involved in planning the work activities
- Procedures for adjusting controls to optimise the operation of the equipment
- Procedures to be followed in the event of an emergency
- Relevant sections of national and state or territory regulatory requirements and codes of practice
- Relevant OH&S and environmental procedures and regulations
- Procedures for managing and controlling hazardous situations when carrying out work activities
- Sources of information on differences in equipment and related standard operating and servicing procedures

Required skills:

- Interpret a DME or GPS Arrival chart
- Determine DME or GPS Arrival applicable minima for aircraft
- Determine conditions permitting descent below minima
- Perform systematic scan techniques
- Communicate effectively with others when performing a DME/GPS Arrival
- Read and interpret instructions, regulations, procedures and other information relevant to a

REQUIRED KNOWLEDGE AND SKILLS

DME/GPS Arrival

- Interpret and follow operational instructions and prioritise workload
- Complete documentation related to a DME/GPS Arrival
- Operate electronic communication equipment to required protocol
- Work collaboratively with others when performing a DME/GPS Arrival
- Adapt appropriately to cultural differences in the workplace, including modes of behaviour and interactions with others
- Promptly report and/or rectify any identified problems that may occur when performing a DME/GPS Arrival in accordance with regulatory requirements and workplace procedures
- Implement contingency plans for unexpected events that may arise when performing a DME/GPS Arrival
- Apply precautions and required action to minimise, control or eliminate hazards that may exist during a DME/GPS Arrival
- Monitor and anticipate operational problems and hazards and take appropriate action
- Monitor work activities in terms of planned schedule
- Modify activities dependent on differing workplace contingencies, situations and environments
- Work systematically with required attention to detail without injury to self others, or damage to goods or equipment
- Adapt to differences in equipment and operating environment in accordance with standard operating procedures
- Select and use required personal protective clothing and equipment conforming to industry and OH&S standards
- Implement OH&S procedures and relevant regulations
- Identify and correctly use equipment required to perform a DME/GPS Arrival

Evidence Guide

EVIDENCE GUIDE

The Evidence Guide provides advice on assessment and must be read in conjunction with the performance criteria, required knowledge and skills, the range statement and the assessment guidelines for this Training Package.

Critical aspects for assessment and evidence required to demonstrate competency in this unit

- The evidence required to demonstrate competency in this unit must be relevant to and satisfy all of the requirements of the elements and performance criteria of this unit and include demonstration of applying:
 - the underpinning knowledge and skills
 - relevant legislation and workplace procedures
 - other relevant aspects of the range statement

Context of and specific resources for assessment

- Performance is demonstrated consistently over a period of time and in a suitable range of contexts
- Resources for assessment include:
 - a range of relevant exercises, case studies and/or other simulated practical and knowledge assessment, and/or
 - access to an appropriate range of relevant operational situations in the workplace
 - In both real and simulated environments, access is required to:
 - relevant and appropriate materials and equipment, and
 - applicable documentation including workplace procedures, regulations, codes of practice and operation manuals

Method of assessment

- Assessment of this unit must be undertaken by a registered training organisation
- As a minimum, assessment of knowledge must be conducted through appropriate written/oral tests
- Practical assessment must occur:
 - through activities in an appropriately simulated environment at the registered training organisation, and/or
 - in an appropriate range of situations in the workplace

Range Statement

RANGE STATEMENT

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance.

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| Tasks may be undertaken in: | <ul style="list-style-type: none">• IMC• VMC with simulated IMC conditions |
| Performance may be demonstrated in: | <ul style="list-style-type: none">• single engine aircraft• multi engine aircraft• synthetic training device approved by the relevant authority• variable air traffic conditions• variable weather conditions• variable flight situations• abnormal situations• classes of airspace as designated by the Civil Aviation Safety Authority |
| Aircraft may include: | <ul style="list-style-type: none">• fixed wing• helicopter• commercial balloons• other commercial or military aircraft |
| Crew may include: | <ul style="list-style-type: none">• single pilot• multi crew |
| Instruments may be: | <ul style="list-style-type: none">• fitted flight instruments suitable for instrument flight• head up display suitable for instrument flight |
| Limitations may be imposed by: | <ul style="list-style-type: none">• local noise abatement requirements and curfews• airspace endorsements |
| Classes of airspace may be: | <ul style="list-style-type: none">• as designated by the regulator• restricted and danger areas• military control zones• Air Defence Identification Zones |
| Navigation aids may include: | <ul style="list-style-type: none">• ADF (Automatic Direction Finder)• VOR (VHF Omni-directional Radio Range)• DME (Distance Measuring Equipment)• RADAR• GPS (Global Positioning System)• FMS (Flight Management Systems)• Moving Map Displays |
| Conditions may include: | <ul style="list-style-type: none">• a method of simulating IMC• simulated icing conditions• moderate turbulence |

RANGE STATEMENT

Dependent on the type of organisation concerned and the local terminology used, workplace procedures may include:	• simulated hazardous weather • Autopilot/Flight Director • FMS/ other NAV system • simulation of emergency and abnormal procedures • company procedures • enterprise procedures • organisational procedures • established procedures • standard operating procedures
Information/documents may include:	• relevant sections of Civil Aviation Safety Regulations and Civil Aviation Orders • in Defence context, relevant Defence Orders and Instructions • Flight Manual/Pilot's Operating Handbook (POH) • Manual of Standards - Pilot Licensing (MOS-PL) • Aeronautical Information Publication (AIP) • En Route Supplement Australia (ERSA) • charts • operations manuals • approved checklists • workplace procedures and instructions and job specification • induction and training materials • conditions of service, legislation and industrial agreements including workplace agreements and awards
Applicable regulations and legislation may include:	• relevant Civil Aviation Safety Regulations and Civil Aviation Orders • in Defence context, relevant Defence Orders and Instructions • relevant state/territory OH&S legislation • relevant state/territory environmental protection legislation • relevant Australian Standards
Performance includes tolerances specified in either of:	• relevant licence and aircraft rating requirements of the Civil Aviation Safety Authority (CASA) such as: • Manual of Standards • relevant Defence documentation such as: • Defence Orders and Instructions • approved curricula and training documentation

Unit Sector(s)

Not applicable.

Competency field

Competency Field	Y - Aircraft Operation and Traffic Management
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