



**Australian Government**

# **AVIY5028A Perform instrument departure - published procedures (SID/SRD)**

**Revision Number: 1**

# **AVIY5028A Perform instrument departure - published procedures (SID/SRD)**

## **Modification History**

Not applicable.

## **Unit Descriptor**

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This unit involves the skills and knowledge required to perform an instrument departure using a published procedure. This includes determining the applicable take-off ceiling and visibility minima, calculating and maintaining the obstacle clearance limits for climb during flight to Lowest Safe Altitude (LSALT) while on climb to cruising altitude/level; and complying with published Standard Instrument Departure (SID) or Standard Radar Departure (SRD), graphic depiction or narrative requirements in Instrument Meteorological Conditions (IMC)/simulated IMC under Instrument Flight Rules (IFR). 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 instrument departure using published procedures (SID/SRD) 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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
|------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>1 Determine applicable standards for an instrument departure using published procedures</b> | <ul style="list-style-type: none"><li>1.1 Standard take-off minima is determined for the aerodrome in accordance with Aeronautical Information Publication (AIP)</li><li>1.2 Plan is developed to ensure obstacle clearance requirements for the take-off area</li><li>1.3 Aircraft performance is calculated to ensure minimum design climb gradient of the SID or SRD and any additional specified gradients can be achieved</li></ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
| <b>2 Take off and climb to cruising level using published procedures</b>                       | <ul style="list-style-type: none"><li>2.1 Appropriate checklist items are completed and confirmed to ensure the aircraft systems applicable to the instrument take-off are operating correctly</li><li>2.2 Radios, navigation aids/systems and flight instruments are set to the desired setting prior to initiating the take-off</li><li>2.3 Track, altitude requirements and emergency procedures for an SID or SRD are reviewed and briefed</li><li>2.4 Climb to cruising altitude/level after take-off is achieved from standard take-off ceiling</li><li>2.5 Obstacle and terrain clearance is maintained while below LSALT/MSA to intercept track in accordance with SID or SRD requirements</li><li>2.6 Transitions from visual meteorological conditions to actual or simulated instrument meteorological conditions are performed without loss of control of the aircraft</li><li>2.7 Radio transmissions are performed in accordance with AIP requirements</li></ul> |

## Required Skills and Knowledge

### REQUIRED KNOWLEDGE AND SKILLS

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

#### Required knowledge:

- Take-off minima for single and twin engine aircraft for aerodromes with a relevant instrument approach procedures
- Conditions required to effect a take-off with no meteorological forecast
- SID and SRD procedures and limitations
- SID and SRD tracking and performance requirements, and flight parameters assumed of the aircraft
- Pilot's responsibilities if SID or SRD tracking and performance requirements cannot be met
- Pilot's responsibilities when SID or SRD clearance is given or cancelled
- Radio reports requirements to be made in an SID or SRD
- Procedures for loss of radio communication during SID or SRD
- Procedures for abnormal operations and/or emergencies during SID, including navigation aid failure

#### Required skills:

- Interpret a SID or SRD chart
- Calculate standard take-off minima
- Communicate effectively whilst performing a published instrument departure
- Read and interpret instructions, regulations, procedures and other information relevant to a published instrument departure
- Interpret and follow operational instructions and prioritise workload
- Complete documentation related to a published instrument departure
- Operate electronic communication equipment to required protocol
- Work collaboratively with others when performing a published instrument departure
- 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 published instrument departure in accordance with regulatory requirements and workplace procedures
- Implement contingency plans for unexpected events that may arise when performing a published instrument departure
- Apply precautions and required action to minimise, control or eliminate hazards that may exist while performing a published instrument departure
- Monitor and anticipate operational problems and hazards and take appropriate action

## **REQUIRED KNOWLEDGE AND SKILLS**

- 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 published instrument departure

# 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.

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

## RANGE STATEMENT

|                                                                                                                   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
|-------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Dependent on the type of organisation concerned and the local terminology used, workplace procedures may include: | <ul style="list-style-type: none"> <li>• moderate turbulence</li> <li>• simulated hazardous weather</li> <li>• Autopilot/Flight Director</li> <li>• FMS/ other NAV system</li> <li>• simulation of emergency and abnormal procedures</li> <li>• company procedures</li> <li>• enterprise procedures</li> <li>• organisational procedures</li> <li>• established procedures</li> <li>• standard operating procedures</li> </ul>                                                                                                                                                                                                                                                                                                                             |
| Information/documents may include:                                                                                | <ul style="list-style-type: none"> <li>• relevant sections of Civil Aviation Safety Regulations and Civil Aviation Orders</li> <li>• in Defence context, relevant Defence Orders and Instructions</li> <li>• Flight Manual/Pilot's Operating Handbook (POH)</li> <li>• Manual of Standards - Pilot Licensing (MOS-PL)</li> <li>• Aeronautical Information Publication (AIP)</li> <li>• En Route Supplement Australia (ERSA)</li> <li>• charts</li> <li>• operations manuals</li> <li>• approved checklists</li> <li>• workplace procedures and instructions and job specification</li> <li>• induction and training materials</li> <li>• conditions of service, legislation and industrial agreements including workplace agreements and awards</li> </ul> |
| Applicable regulations and legislation may include:                                                               | <ul style="list-style-type: none"> <li>• relevant Civil Aviation Safety Regulations and Civil Aviation Orders</li> <li>• in Defence context, relevant Defence Orders and Instructions</li> <li>• relevant state/territory OH&amp;S legislation</li> <li>• relevant state/territory environmental protection legislation</li> <li>• relevant Australian Standards</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                |
| Performance includes tolerances specified in either of:                                                           | <ul style="list-style-type: none"> <li>• relevant licence and aircraft rating requirements of the Civil Aviation Safety Authority (CASA) such as:</li> <li>• Manual of Standards</li> <li>• relevant Defence documentation such as:</li> <li>• Defence Orders and Instructions</li> <li>• approved curricula and training documentation</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                         |

## **Unit Sector(s)**

Not applicable.

## **Competency field**

**Competency Field**                      Y - Aircraft Operation and Traffic Management