



**Australian Government**

**Department of Education, Employment and Workplace Relations**

# **AVIY4063A Perform close formation flight**

**Revision Number: 1**

## **AVIY4063A Perform close formation flight**

### **Modification History**

Not applicable.

### **Unit Descriptor**

#### **Unit Descriptor**

This unit involves the skills and knowledge required to pilot an aircraft in formation flight safely while remaining within the aircraft's structural and engine limitations and the pilot's physiological limitations during visual flight. 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) and/or ADF; airspace control requirements and Day Visual Flight Rules; and aircraft control principles, regulations, safety codes, protocols and procedures required to perform formation flight in an aircraft.

Use for ADF Aviation is to be in accordance with relevant Defence Orders and Instructions and applicable CASA compliance.

Operations are conducted within a variety of operational contexts within the Australian aviation industry.

Work is performed under limited supervision.

This unit of competency is nominally packaged at Certificate IV.

### **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 Fly close formation</b>  | <ul style="list-style-type: none"> <li>1.1 Specified echelon formation stations are maintained during flight manoeuvres and phases</li> <li>1.2 Specified line astern formation station is maintained during aircraft flight manoeuvres and phases</li> <li>1.3 Balanced flight is maintained</li> <li>1.4 Clear and concise radiotelephony phraseology or hand signals are utilised to ensure precise advice to formation lead and other formation aircraft</li> </ul> |
| <b>2 Perform station changes</b>  | <ul style="list-style-type: none"> <li>2.1 Aircraft is manoeuvred safely to specified alternative formation stations during flight manoeuvres as per briefed sequence and/or lead's direction</li> <li>2.2 Clearance with other formation aircraft is maintained</li> <li>2.3 Formation lead changes are conducted as required</li> </ul>   |
| <b>3 Perform breakaway and rejoin</b>                                     | <ul style="list-style-type: none"> <li>3.1 Loss of contact with formation or any other requirement to break away is recognised</li> <li>3.2 Break away from the formation is implemented</li> <li>3.3 Formation is rejoined at specified stations</li> </ul>  |
| <b>4 Manage abnormal and emergency situations during formation flight</b> | <ul style="list-style-type: none"> <li>4.1 Control of aircraft is maintained</li> <li>4.2 Abnormal or emergency situations are managed in accordance with standard operating procedures or Flight Manual/Pilot's Operating Handbook</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:

- Relevant sections of Civil Aviation Safety Regulations and Civil Aviation Orders
- In Defence context, relevant Defence Orders and Instructions
- Relevant OH&S and environmental protection procedures and regulations
- Reference points that are used to achieve the specified left and right echelon formation positions for the aircraft being flown with respect to specified formation position
- Reference points that are used to achieve the line astern position for the aircraft being flown with respect to specified formation position
- Procedure for flying close formation
- Procedure for performing station changes
- Non-verbal signals applicable to formation operations
- Procedure to follow when visual contact is lost with the lead aircraft
- Procedures to be followed during abnormal and emergency situations
- Procedures for performing straight and turning rejoins to a formation
- Formation Standard Operating Procedures (SOPs)
- Formation radio procedures

#### Required skills:

- Operate the aircraft within its limitations, achieving optimum performance
- Compensate for the secondary effects of controls
- Perform formation collision avoidance turns
- Select and use relevant equipment in formation flight situations
- Use instruments to monitor aircraft performance
- Recognise relative position changes with reference to the formation
- Communicate effectively with others when performing formation flight
- Read, interpret and follow instructions, regulations, procedures and other information relevant to performing formation flight in an aircraft
- Complete documentation related to performing formation flight
- Operate electronic communication equipment to required protocol
- Work collaboratively with other when performing formation flight
- 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

**REQUIRED KNOWLEDGE AND SKILLS**

formation flight in accordance with regulatory requirements and workplace procedures

- Implement contingency plans for unexpected events that may arise when performing formation flight
- Apply precautions and required action to minimise, control or eliminate hazards that may exist during the performance of formation flight
- 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 formation flight

# 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
  - following relevant legislation and workplace procedures
  - maintaining station during echelon and line astern formations
  - ensuring precise advice to formation lead and other formation aircraft by use of clear and concise radiotelephony, phraseology or hand signals
  - manoeuvring aircraft safely to perform station changes
  - maintaining clearance from other formation aircraft
  - conducting formation lead changes
  - recognising loss of contact with formation or any other requirement to break away
  - implementing break away from formation and rejoin at specified stations
  - maintaining aircraft control
  - managing abnormal or emergency situations in accordance with standard operating procedures or Flight Manual/Pilot's Operating Handbook

### 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

**EVIDENCE GUIDE**

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:
- variable weather conditions in accordance with Day Visual Flight Rules (VFR)
  - night Visual Meteorological Conditions (VMC)
  - Instrument Meteorological Conditions (IMC)
  - two or more aircraft
- Performance may be demonstrated in:
- single engine aircraft
  - multi engine aircraft
  - variable air traffic conditions
  - variable flight situations
  - abnormal situations
  - classes of airspace as designated by the Civil Aviation Safety Authority
- Aircraft may include:
- fixed wing
  - helicopter
  - other commercial or military aircraft
- Crew may include:
- single pilot
  - multi crew
- Instruments may include:
- fitted flight instruments
  - heads up display
- Limitations may be imposed by:
- local noise abatement requirements and curfews
  - airspace endorsements
- Flight manoeuvres may include:
- straight and level
  - turning
  - belly turns
  - climbing/descending
  - aerobatics
  - wingovers
- Flight phases include:
- take-off
  - departure
  - transit/area operations
  - approach
  - landing
- Echelon formation stations may include:
- left
  - right
- Abnormal or emergency situations
- loss of contact



## RANGE STATEMENT

may include:

- aircraft collision
- aircraft malfunction
- bird strike

Dependent on the type of organisation concerned and the local terminology used, workplace procedures may be referred to as:

- 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 pertaining to formation flight
- 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)
- relevant sections of the Civil Aviation Advisory Publications (CAAP)
- 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
- relevant Bureau of Meteorology, International Civil Aviation Organization (ICAO) and/or World Meteorology Organization (WMO) publications

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 requirements of the Civil Aviation Safety Authority (CASA) such as:
  - Day VFR syllabus
  - Manual of Standards
  - Relevant defence documentation such as:

## **RANGE STATEMENT**

- Defence Orders and Instructions
- approved curricula and training documentation

## **Unit Sector(s)**

Not applicable.

## **Competency field**

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