



Australian Government

Department of Education, Employment and Workplace Relations

AVIY4066A Control aircraft in advanced flight manoeuvres

Revision Number: 1

AVIY4066A Control aircraft in advanced flight manoeuvres

Modification History

Not applicable.

Unit Descriptor

Unit Descriptor

This unit involves the skills and knowledge required to recognise and recover from abnormal attitude and fully developed spins 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 control an aircraft in advanced abnormal flight manoeuvres.

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
1 Recognise and recover from abnormal aircraft attitudes	1.1 Abnormal aircraft attitude is recognised 1.2 Abnormal aircraft attitude recovery procedures are conducted in accordance with Flight Manual/Pilot's Operating Handbook 1.3 Aircraft controllability checks are performed as required
2 Recover from an induced fully developed aircraft spin	2.1 Aircraft spin entry is induced 2.2 Aircraft fully developed spin is established and recognised 2.3 Direction of aircraft rotation is identified 2.4 Aircraft spin recover procedures are performed in accordance with Flight Manual/Pilot's Operating Handbook

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
- Procedures and requirements for performing pre-manoeuve checks
- Primary, secondary and tertiary effects of controls
- Types of abnormal aircraft attitudes
- Procedures and requirements for aircraft controllability checks
- Aerodynamic principles for entry into and exit from a fully developed spin and spiral dive
- Techniques to initiate and recover from abnormal aircraft attitudes, fully developed spin and spiral dive
- Physiological effects applicable to maximum performance flight
- Difference between a spin and a spiral dive
- Aircraft limitations for the type of aircraft flown including environmental factors
- Regulatory requirements applicable to performing advanced abnormal aircraft flight manoeuvre
- Pre-manoeuve checks

Required skills:

- Operate the aircraft within its limitations, achieving optimum performance
- Perform pre-manoeuve checks
- Maintain lookout using a systematic scan technique
- Compensate for the secondary and tertiary effects of controls
- Identify symptoms of fully developed spin and spiral dive
- Select and use relevant equipment in advanced abnormal aircraft flight situations
- Use instruments to monitor aircraft performance
- Communicate effectively with others when performing advanced abnormal aircraft flight manoeuvres
- Read, interpret and follow instructions, regulations, procedures and other information relevant to performing advanced abnormal aircraft flight manoeuvres
- Complete documentation related to performing advanced abnormal aircraft flight manoeuvres
- Operate electronic communication equipment to required protocol
- Work collaboratively with others when performing advanced abnormal aircraft flight

REQUIRED KNOWLEDGE AND SKILLS

manoeuvres

- 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 navigating aircraft in accordance with regulatory requirements and workplace procedures
- Implement contingency plans for unexpected events that may arise when performing advanced abnormal aircraft flight manoeuvres
- Apply precautions and required action to minimise, control or eliminate hazards that may exist during the performance of advanced abnormal aircraft flight manoeuvres
- 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 advanced abnormal aircraft flight manoeuvres

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
 - recognising abnormal aircraft attitude and conduct recovery procedures in accordance with Flight Manual/Pilot's Operating Handbook
 - performing aircraft spin recovery procedures in accordance with 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 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)
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
Unusual aircraft attitudes may include:	• high or low nose attitudes • varying angles of bank • power settings • unbalanced flight • spiral dive
Spin types may include:	• erect • inverted
Spin recovery procedures may include:	• opposed yaw • centralise controls • as specified in the Flight Manual/Pilot's Operating Handbook (POH)
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	• relevant sections of Civil Aviation Safety Regulations and Civil Aviation Orders

RANGE STATEMENT

include:

- 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
- 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:
- Defence Orders and Instructions
- approved curricula and training documentation

Unit Sector(s)

Not applicable.

Competency field

Competency Field

Y - Aircraft Operation and Traffic Management