



Australian Government

Department of Education, Employment and Workplace Relations

AVIY5021A Conduct limited instrument panel manoeuvres

Revision Number: 1

AVIY5021A Conduct limited instrument panel manoeuvres

Modification History

Not applicable.

Unit Descriptor

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This unit involves the skills and knowledge required to perform all normal flight manoeuvres and recover from unusual attitudes using the limited instrument panel during flight under IMC. Licensing, legislative, regulatory or certification requirements are applicable to this unit.

Application of the Unit

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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 Rules (IFR); and aircraft control principles, regulations, safety codes, protocols and procedures required to control a aircraft solely by reference to the limited instrument panel 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
1 Recognise failure of attitude indicator and/or stabilised heading indicator	1.1 Flight instruments and instrument power sources are monitored 1.2 Warning indicators or erroneous instrument indications are recognised 1.3 Transitions to instrument flight by reference to limited panel flight instruments are established
2 Perform manoeuvres using limited instrument panel	2.1 Flight instrument indications are interpreted and reacted to, to achieve specified flight profiles using limited instrument panel 2.2 Power and attitude are set and maintained by reference to the limited instrument panel to achieve straight and level performance during normal cruise 2.3 Power and attitude are set and maintained by reference to the limited instrument panel to achieve straight and level performance in an aircraft approach configuration within nominated speed limits 2.4 Power and attitude are set and maintained by reference to the limited instrument panel to achieve nominated climb performance 2.5 Power and attitude are set and maintained by reference to the limited instrument panel to achieve nominated descent performance 2.6 Power, attitude and bank during climb, descent and straight and level flight are set and maintained by reference to the limited instrument panel to achieve a rate one turn onto a nominated heading 2.7 Aircraft is balanced 2.8 Aircraft is trimmed 2.9 Aircraft is levelled at a nominated altitude during a straight or turning flight whilst in a climb or descent
3 Recover from unusual attitudes using limited flight instrument panel	3.1 Unusual attitude is identified 3.2 Controlled flight is resumed by reference to flight instruments using a limited instrument panel 3.3 Straight and level attitude is achieved without excessive oscillations at the horizon 3.4 Aircraft is recovered to above LSALT

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 procedures and regulations
- Principles of aerodynamics
- Operation of the flight instruments, power requirements and failure indications
- Functions and effects of all aircraft controls
- The need for flying using the limited instrument panel
- The function and limitations of limited panel flight instruments
- The interpretation of the limited panel instrument indications
- The physiological factors which may affect pilots during instrument flight
- Limited panel instrument scan techniques
- Hazards that exist when controlling an aircraft by reference to the limited instrument panel and related hazard control procedures and precaution
- Problems that may occur when controlling an aircraft by reference to the limited instrument panel and appropriate action that should be taken in each case

Required skills:

- Perform manoeuvres and procedures solely by use of the limited instrument panel
- Use instrument scan techniques applicable to the condition of flight
- Anticipate and allow for normal adverse physiological reaction to limited panel flight
- Maintain orientation in simulated instrument flight conditions
- Use limited instruments to monitor aircraft performance
- Achieve compliance with regulatory requirements
- Communicate effectively with others when controlling an aircraft by reference to the limited instrument panel
- Read and interpret instructions, regulations, procedures and other information relevant to controlling an aircraft by reference to the limited instrument panel
- Interpret and follow operational instructions and prioritise work
- Complete documentation related to limited instrument panel manoeuvres
- Operate electronic communication equipment to required protocol
- Work collaboratively with others when controlling an aircraft by reference to the limited instrument panel

REQUIRED KNOWLEDGE AND SKILLS

- 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 controlling an aircraft by reference to the limited instrument panel in accordance with regulatory requirements and workplace procedures
- Implement contingency plans for unexpected events that may arise when controlling an aircraft by reference to the limited instrument panel
- Apply precautions and required action to minimise, control or eliminate hazards that may exist while controlling an aircraft by reference to the limited instrument panel
- 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 control an aircraft by reference to the limited instrument panel

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:
- IMC
 - VMC with simulated IMC conditions
- Performance may be demonstrated in:
- single engine aircraft
 - multi engine aircraft
 - synthetic training device approved by the appropriate 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:
- fixed wing
 - helicopter
 - other commercial or military aircraft
- Crew may include:
- single pilot
 - multi crew
- Instruments may be:
- flight instruments suitable for instrument flight
 - head up display suitable for instrument flight
- Limitations may be imposed by:
- local noise abatement requirements and curfews
 - airspace endorsements
- Classes of airspace may be:
- as designated by the regulator
 - restricted and danger areas
 - military control zones
 - Air Defence Identification Zones
- Conditions may include:
- a method of simulating IMC
 - simulated icing conditions
 - moderate turbulence
 - simulated hazardous weather
 - Autopilot/Flight Director
 - FMS/ other NAV system
 - simulation of emergency and abnormal procedures
- Nominated descent may include:
- continual at a defined rate
 - standard-rate
- Unusual attitude may include:
- nose high and low
 - varying angles of bank and power settings

RANGE STATEMENT

Dependent on the type of organisation concerned and the local terminology used, workplace procedures may include:

- unbalanced flight
- 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