



Australian Government

AVIH0002 Plan a flight under visual flight rules

Release: 1

AVIH0002 Plan a flight under visual flight rules

Modification History

Release 1. This is the first release of this unit of competency in the AVI Aviation Training Package.

Application

This unit involves the skills and knowledge required to plan a flight under visual flight rules (VFR), in compliance with the relevant regulatory requirements of the Civil Aviation Safety Authority (CASA) and national operating standards.

It includes determining aircraft VFR flight requirements, obtaining and using operational documents, preparing VFR flight plans, making flight notifications and programming navigation systems.

This unit addresses aviation technical skill requirements (physical, mental and task-management abilities) related to route planning and navigation duties of flight crew, and contributes to safe and effective performance in complex aviation operational environments.

Operations are conducted as part of recreational, commercial and military aircraft activities across a variety of operational contexts within the Australian aviation industry.

Work is performed independently or under limited supervision within a single-pilot or multi-crew environment.

Licensing, legislative, regulatory or certification requirements are applicable to this unit.

Use for Defence Aviation is to be in accordance with relevant Defence Orders, Instructions, Publications and Regulations.

Pre-requisite Unit

Not applicable.

Competency Field

H – Route Planning and Navigation

Unit Sector

Not applicable.

Elements and Performance Criteria

ELEMENTS

Elements describe the essential outcomes.

PERFORMANCE CRITERIA

Performance criteria describe the performance needed to demonstrate achievement of the element.

1 Determine aircraft meets requirements for VFR flight

- 1.1 Aircraft requirements for VFR flight are determined
- 1.2 Hazards are identified, risks are assessed and hazard management is implemented
- 1.3 Flight and navigation instruments, minimum electrical lighting, navigation equipment and any other requirements fitted to aircraft are checked to ensure they are suitable and serviceable for VFR flight

2 Obtain and use operational documents

- 2.1 Operational documents applicable to the flight are obtained and checked for currency
- 2.2 Applicable information contained in documents for flight planning and management is interpreted and applied
- 2.3 Documents required for the flight are stowed and their accessibility for the pilot during flight is ensured

3 Prepare flight plan for VFR flight

- 3.1 Charts suitable for intended VFR flight are selected and prepared
- 3.2 Applicable information to prepare a flight plan that details tracks, distances, times, altitudes to be flown and fuel requirements to reach destination are obtained, analysed and applied
- 3.3 Meteorological, airways facilities, aerodrome and Notice to Airmen (NOTAM) information applicable to planning and conducting a flight is obtained, interpreted and applied
- 3.4 Routes to optimise options in an engine failure are planned

4 Determine operational requirements

- 4.1 Suitability of aerodrome lighting for night operations is determined
- 4.2 Curfew requirements are complied with
- 4.3 Duration of flight is determined
- 4.4 Holding, alternate and reserve fuel requirements due to weather, navigation aid availability and aerodrome lighting are determined in accordance with operational requirements

	4.5	Total fuel requirements are calculated
5 Make flight notification	5.1	Flight notification is prepared for planned VFR flight
	5.2	Completed flight notification is submitted
	5.3	Flight notification acceptance is confirmed
6 Program navigation system	6.1	Data for transfer to approved airborne navigation system is prepared
	6.2	Navigation data is loaded and checked

Foundation Skills

Foundation skills essential to performance are explicit in the performance criteria of this unit of competency.

Range of Conditions

Range is restricted to essential operating conditions and any other variables essential to the work environment.

Unit Mapping Information

No equivalent unit.

Links

Companion Volume implementation guides are found in VETNet - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=4725260a-0af3-4daf-912b-ef1c2f3e5816>

Assessment Requirements for AVIH0002 Plan a flight under visual flight rules

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Performance Evidence

Evidence required to demonstrate competence in this unit must be relevant to and satisfy all of the requirements of the elements and performance criteria on at least one occasion and include:

- adapting to differences in equipment and operating environment in accordance with standard operating procedures
- applying precautions and required action to minimise, control or eliminate identified hazards
- applying relevant aeronautical knowledge
- applying relevant legislation and workplace procedures
- calculating fuel requirements
- communicating effectively with others
- completing relevant documentation
- determining alternate aerodrome requirements and suitability for a visual flight to a specified destination given relevant information including NOTAM
- determining currency of operational documents
- determining fuel quantity required for a visual flight
- determining holding requirements due to weather, traffic or traffic advisory
- determining meteorological forecasts required for a visual flight
- determining operational requirements
- determining whether a flight should proceed based on available meteorological forecasts
- extracting and applying relevant information from operational documents
- identifying and correctly using equipment required when planning a flight under VFR
- implementing contingency plans
- implementing work health and safety (WHS)/occupational health and safety (OHS) procedures and relevant regulations
- interpreting meteorological forecasts
- interpreting navigation charts
- modifying activities depending on workplace contingencies, situations and environments
- monitoring and anticipating operational problems and hazards and taking appropriate action
- operating electronic communications equipment to required protocol
- reading, interpreting and following relevant regulations, instructions, procedures, information and signs
- reporting and/or rectifying problems, faults or malfunctions promptly, in accordance with workplace procedures

- selecting and using required personal protective clothing and equipment conforming to industry and WHS/OHS standards
- selecting suitable navigation aids/systems
- working collaboratively with others
- working systematically with required attention to detail without injury to self or others, or damage to goods or equipment.

Knowledge Evidence

Evidence required to demonstrate competence in this unit must be relevant to and satisfy all of the requirements of the elements, performance criteria and include knowledge of:

- aerodrome and en route holding procedures
- aircraft fuel planning including holding, alternate, fixed reserve and usage rates
- aircraft loading calculations and planning factors including:
 - arm, moment, datum, station and index unit
 - centre of gravity and limitations
 - empty weight, zero fuel weight (ZFW), ramp weight
 - mean aerodynamic chord (MAC)
 - maximum take-off and landing weights
- airspace requirements and procedures under VFR conditions
- basic and general meteorological considerations and requirements for VFR flight
- basic meteorology:
 - local weather
 - forecasts and reports
 - observations
- calculating maximum structural take-off and landing weights from performance charts
- CASR Part 61 Manual of Standards Schedule 3 Aeronautical Knowledge relevant to visual flight rules
- charts and publications:
 - aeronautical information publication (AIP) visual chart types
 - how to decode chart symbols
 - how to interpret topographic detail
 - how to estimate, measure and plot positions and distances on visual charts
 - how to describe map projections used in aviation
 - how to describe methods of representing scale

- computations and conversions of navigation data:
 - airspeed
 - ground speed
 - time
 - distance
 - air temperatures and pressure heights
 - bearings and tracks
- concepts of time:
 - coordinated universal (UTC), local mean, local standard, local summer
 - determine civil twilight
 - time conversions
 - daylight timing factors
 - effects of earth rotation and revolution around the sun
 - effects of changes in longitude on local mean time
- critical point and point of no return (PNR)
- density height calculations
- documents required to be carried on a visual flight
- equi-time point (ETP) and PNR diversion requirements
- factors affecting en route performance, range and endurance
- flight planning preparation:
 - visual chart selection
 - mandatory briefing requirements
 - weather services available
 - requirements and instructions for VFR flight notification
- general meteorology:
 - atmospheric composition
 - atmospheric stability
 - heat
 - temperature pressure
 - humidity
 - clouds and precipitation
 - visibility
 - wind
 - air masses and fronts
 - synoptic meteorology
 - climatology
 - weather services and information
 - flight considerations
- how to determine climb, cruise and descent performance:
 - time, speed, distance, fuel flow/quantity

- appropriate engine settings
- rates of climb/descent
- maximum aircraft range and endurance
- icing conditions and hazards
- limit of VFR operations in single-engine or multi-engine aircraft
- limitations and errors of navigational aids and systems
- flight plan preparation
- VFR cruising levels, selection and hazards
- VFR route planning requirements
- pilot medical fitness and qualifications necessary for visual flight
- pilot navigation principles:
 - map reading
 - chart orientation
 - map to ground and ground to map
 - position lines to establish ground speed, track error and position fix
 - ground feature selection to establish position
 - chart preparation and selection
 - determine visual flight navigation information
- privileges of the VFR rating
- principles of navigation:
 - forms of the earth
- procedures for flight plan amendments and revised estimates for a visual flight
- relevant WHS/OHS and environmental procedures and regulations
- relevant sections of Civil Aviation Safety Regulations (CASRs) and Civil Aviation Orders
- requirements for an alternate aerodrome
- requirements for in-flight progress reports
- requirements for submission of flight notification and search and rescue watch (SARWATCH) times
- specification of aircraft electrical lighting, radio communication and navigation equipment required for visual flight
- specification of aircraft flight instruments required for visual flight
- speed restrictions for visual flight
- usage of 2D radio navigation aids for visual flight navigation
- use of a navigational computer
- validity of a given meteorological forecast for a visual flight
- visual and instrument flight rules and procedures
- weight and balance calculations.

Assessment Conditions

As a minimum, assessors must satisfy applicable regulatory requirements, which include requirements in the *Standards for Registered Training Organisations* current at the time of assessment.

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Assessment processes and techniques must be appropriate to the language, literacy and numeracy requirements of the work being performed and the needs of the candidate.

Assessment must occur in workplace operational situations. Where this is not appropriate, assessment must occur in simulated workplace operational situations that reflect workplace conditions.

Where this unit is used in the context of a commercial pilot licence [CPL(A)] the following operational knowledge must be assessed:

- aerodromes and aeroplane landing areas (ALAs)
- climb, cruise and descent performance
- fuel units.

Where this unit is used in the context of a commercial pilot licence helicopter [CPL(H)] the following operational knowledge must be assessed:

- limitations
- helicopter landing sites (HLS)
- take-off and landing weight
- hover performance
- forward climb performance
- cruise performance
- weight and balance.

Resources for assessment must include access to:

- a range of relevant exercises, case studies and/or simulations
- acceptable means of simulation assessment
- applicable documentation including workplace procedures, regulations, codes of practice and operation manuals
- relevant materials, tools, equipment and personal protective equipment currently used in industry.

Links

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