



Australian Government

AVIW4028 Manage aircraft sensor systems

Release: 1

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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 manage aircraft sensor systems, in compliance with relevant regulatory requirements of the Civil Aviation Safety Authority (CASA) and national operating standards

It includes initialising aircraft sensor systems and optimising aircraft sensor performance.

This unit addresses aviation technical skill requirements (physical, mental and task-management abilities) related to equipment and system operations of flight crews, 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

W – Equipment and Systems Operations

Unit Sector

Not applicable.

Elements and Performance Criteria

ELEMENTS

PERFORMANCE CRITERIA

Elements describe the essential outcomes.

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

1 Initialise aircraft sensor systems

- 1.1 Equipment is enabled in accordance with manufacturer instructions, and organisational policy and procedures
- 1.2 Equipment functional checks are performed in accordance with manufacturer instructions, and organisational policy and procedures
- 1.3 Hazards are identified, risks are assessed and hazard management is implemented
- 1.4 System parameters are initialised for anticipated meteorological and/or oceanographic conditions

2 Optimise aircraft sensor performance

- 2.1 Sensor output is monitored and operational information is used to support operational task requirements
- 2.2 Real time environmental conditions are monitored
- 2.3 System parameters are modified to maintain optimal sensor performance
- 2.4 Abnormal or emergency aircraft sensor system situations are handled in accordance with organisational and regulatory requirements
- 2.5 System faults are identified, diagnosed and appropriate responses are undertaken

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

Sensor systems must include one or more of the following:

- airborne surveillance radar
- acoustics
- communications systems
- electro optical systems

- Environmental conditions must include one or more of the following:
- electronic support measures
 - forward looking infra-red (FLIR)
 - magnetic anomaly detection systems
 - visual observations
 - atmospheric conditions
 - currents
 - local weather conditions
 - salinity
 - sea state
 - Southern Oscillation Index (SOI)
 - water depth and temperature
- Abnormal or emergency aircraft sensor system situations must include one or more of the following:
- avionics malfunction
 - equipment damage
 - fire on-board
 - instrument failure
 - operator/crew incapacitation
 - sensor system malfunction and/or failure

Unit Mapping Information

This unit replaces and is equivalent to AVIW4028A Manage aircraft sensor system.

Links

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