



Australian Government

MEALSU0009 Maintain seat and pod electrical and electronic systems

Release: 1

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Modification History

Release 1. Application changed. Elements and Performance Criteria changed. Foundation Skills made explicit. Range of Conditions removed, and relevant information moved to Assessment Requirements. Assessment Requirements clarified. Supersedes and is equivalent to MEA510 Maintain seat and pod electrical and electronic systems.

Application

This unit describes the skills and knowledge required to apply hand skills to remove and install electrical and electronic system components while overhauling aircraft seats and pods and using basic electrical test equipment and in-flight entertainment system test sets to perform functional tests and confirm system serviceability. Work may be done during scheduled or unscheduled maintenance, and individually or as part of a team.

The unit is used in workplaces that operate under the airworthiness regulatory systems of the Civil Aviation Safety Authority (CASA) and the Defence Aviation Safety Authority (DASA).

Any other relevant legislation, industry standards and codes of practice within Australia must be applied.

Pre-requisite Unit

MEA295 Use electrical test equipment to perform basic electrical tests on aircraft and components

Competency Field

Aviation maintenance

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. Remove and inspect seat and pod electrical system components	1.1 Render system safe and prepare it for work in accordance with maintenance manual to ensure personnel safety 1.2 Remove electrical system components in accordance with maintenance manual while observing all relevant work health and safety (WHS) requirements, including the use of material safety data sheets (MSDSs) and items of personal protective equipment (PPE)

Elements	Performance Criteria
Elements describe the essential outcomes.	Performance criteria describe the performance needed to demonstrate achievement of the element.
	1.3 Inspect removed components for visible signs of damage or deterioration in accordance with maintenance manuals and standard enterprise procedures 1.4 Complete and process required maintenance documentation in accordance with standard enterprise procedures 1.5 Tag, pack or discard removed components in accordance with specified procedures
2. Remove and inspect seat and pod electronic system components	2.1 Render system safe and prepare it for work in accordance with maintenance manual to ensure personnel safety 2.2 Remove electronic system components in accordance with maintenance manual while observing all relevant WHS requirements, including using MSDSs and items of PPE 2.3 Inspect removed components for visible signs of damage or deterioration in accordance with maintenance manuals and standard enterprise procedures 2.4 Complete and process required maintenance documentation in accordance with standard enterprise procedures 2.5 Tag, pack or discard removed components in accordance with specified procedures
3. Install seat and pod electrical system components	3.1 Confirm correct part numbers, modification status, serviceability and shelf life of electrical system components to be installed against maintenance manual 3.2 Perform physical installation of electrical components in accordance with maintenance manual 3.3 Reinstall system to correct physical condition in preparation for required testing 3.4 Complete and process required maintenance documentation in accordance with standard enterprise procedures
4. Install seat and pod electronic system components	4.1 Confirm correct part numbers, modification status, serviceability and shelf life of electronic system components against maintenance manual 4.2 Perform physical installation of electronic components in accordance with the applicable maintenance manual 4.3 Reinstall system to correct physical condition in preparation for required testing 4.4 Complete and process required maintenance documentation in

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Elements describe the essential outcomes.	Performance criteria describe the performance needed to demonstrate achievement of the element.
	accordance with standard enterprise procedures
5. Functionally test seat and pod electrical and electronic systems	5.1 Connect system test set to seat or pod in accordance with maintenance manual or approved vendor procedures 5.2 Apply power to seat or pod in accordance with maintenance manual 5.3 Perform functional testing of seat or pod electrical system for correct operation in accordance with maintenance manual 5.4 Perform functional testing of seat or pod electronic system in accordance with the applicable maintenance manual 5.5 Remove test equipment and complete and process required maintenance documentation in accordance with standard enterprise procedures

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential to performance but not explicit in the performance criteria

- Reading skills to interpret maintenance manuals.
- Writing skills to complete maintenance documentation.
- Numeracy skills to interpret technical information.

Other foundation skills essential to performance are explicit in the performance criteria of this unit.

Unit Mapping Information

Release 1. Supersedes and is equivalent to MEA510 Maintain seat and pod electrical and electronic systems.

Links

Companion Volume implementation guides are found in VETNet -

<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=ce216c9c-04d5-4b3b-9bcf-4e81d0950371>

Assessment Requirements for MEALSU0009 Maintain seat and pod electrical and electronic systems

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Performance Evidence

There must be evidence the candidate has completed all the tasks outlined in the elements and performance criteria of this unit, and demonstrated the ability to:

- maintain seat and pod electrical systems during scheduled and unscheduled maintenance for one item from each of the following groups:
 - electrical cables and looms
 - selectors and switches
 - motors and actuators
 - relays, control units and modules
- maintain seat and pod electronic systems during scheduled and unscheduled maintenance for one item from each of the following groups:
 - display units
 - tuners/selectors
 - volume controls
 - audio headset receptacles
 - data cables
- while performing the above maintenance:
 - remove and install electrical components that involve either one of the following connection methods:
 - bolt
 - plug connectors
 - recognise defects in and deterioration of electrical cables to aircraft industry standards, including crimped and soldered joints
 - correctly interpret aircraft wire markings, terminal block identification and plug/socket pin numbering systems
 - inspect electrical looms and harness pre- and post-removal and installation to ensure:
 - minimum bends are maintained
 - cable is not in tension
 - plugs are correctly aligned
 - security of route ensures no chaffing of insulation
 - adequate clipping and cable ties have been utilised

- construction complies with aircraft industry standards
- plug connector pin removal and insertion where soldering is not required
- recognise damage and visual defects in electrical components, including actuators, motors and switches
- recognise damage and visual defects in electronic system components, including one or more of display screens, tuners, volume controls, audio headset receptacles and data cables
- apply cleanliness requirements and work health and safety (WHS) precautions at all times and as relevant to the systems being worked on.

Knowledge Evidence

There must be evidence the candidate has knowledge of:

- relevant WHS procedures for seat and pod electrical and electronic systems
- how to obtain and use relevant material safety data sheets (MSDSs)
- using applicable items of personal protective equipment (PPE)
- component attachment methods
- connection of hardware and plugs
- electrical wiring used in aircraft and wire marking
- plug/socket pin numbering and terminal block identification
- cable and loom installation requirements, including bonding and screening
- crimping tools and crimp terminals
- procedures for removal and insertion of plug connector pins where soldering is not required
- typical faults that affect seat and pod electrical and electronic systems, including:
 - broken or chafed wires
 - corrosion of plugs and connectors
 - physical damage to components
 - wear
 - evidence of electrical or electronic component overheating
- handling and maintenance precautions relating to electronic displays and electrostatic sensitive devices
- electromagnetic environment
- data cable installation requirements.
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Assessment Conditions

The following conditions of assessment represent the requirements of the regulators (DASA and CASA) and maintenance stakeholders and must be rigorously observed.

Skills must have been demonstrated under routine supervision in the workplace or in a simulated environment that reflects workplace conditions and contingencies encountered in maintaining seat and pod electrical and electronic systems. The following conditions must be met for this unit:

- use of suitable facilities, equipment and resources, including:
 - workplace procedures, manufacturing specifications, codes, standards, manuals, and reference materials relevant to maintaining seat and pod electrical and electronic systems
 - tools and equipment specified in maintenance manuals
 - general-purpose tools and items of ground support and test equipment found in most routine situations.

Evidence of tasks demonstrating competency must be recorded in a log of industrial experience and achievement. Assessors must satisfy the NVR/AQTF mandatory competency requirements for assessors.

Links

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