



Australian Government

MEAAVI0038 Use electronic test equipment

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 MEA261 Use electronic test equipment

Application

This unit describes the skills and knowledge required to apply skills in the use of electronic test equipment to measure electronic circuit parameters and test performance. Applications include aircraft components both in the hangar and workshop undergoing scheduled or unscheduled maintenance and involving individual and team activities.

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

MEA107 Interpret and use aviation maintenance industry manuals and specifications

MEA154 Apply work health and safety practices in aviation maintenance

MEA155 Plan and organise aviation maintenance work activities

MEA156 Apply quality standards during aviation maintenance activities

MEA157 Complete aviation maintenance industry documentation

MEA158 Perform basic hand skills, standard trade practices and fundamentals in aviation maintenance

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. Select required test equipment	1.1 Identify system or component test requirements from maintenance documentation 1.2 Select appropriate test equipment based on test requirements

Elements	Performance Criteria
Elements describe the essential outcomes.	Performance criteria describe the performance needed to demonstrate achievement of the element.
2. Prepare test equipment for use	2.1 Check test equipment for serviceability, and fit required leads in accordance with maintenance documentation 2.2 Select required function and range of measurement in accordance with maintenance manual
3. Test system or component	3.1 Determine test points and polarity for measurement or testing from test system manual and maintenance manual 3.2 Measure required electronic circuit parameters with test equipment in accordance with maintenance documentation while observing all relevant work health and safety (WHS) requirements

Foundation Skills

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

- Numeracy skills to interpret and record technical information and take measurements.

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 MEA261 Use electronic test equipment.

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 MEAAVI0038 Use electronic test equipment

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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:

- use each of the following items of test equipment to measure electronic circuit parameters and test performance:
 - electronic multimeters
 - phase-angle voltmeters (may be omitted where not applicable to the enterprise)
 - oscilloscopes (dual differential, differential, delayed time base, storage)
 - current probes
 - logic and discrete component testers
 - electronic component substitution boxes and miscellaneous test adapters.

Knowledge Evidence

There must be evidence the candidate has knowledge of:

- the construction, calibration for use and testing for serviceability of:
 - electronic multimeters
 - phase-angle voltmeters
 - oscilloscopes (dual differential, differential, delayed time base and storage)
 - current probes
 - logic and discrete component testers
 - electronic component substitution boxes and miscellaneous test adapters
- use of selectors and scale adjustment of each item of test equipment to ensure accurate measurement of applicable parameters
- selection criteria for appropriate test equipment on the basis of general trade knowledge where specific test equipment is not specified
- methods used to identify polarity and connection to components and circuits for required measurement or testing
- high-speed oscilloscope techniques, probe calibration and safety precautions
- work health and safety (WHS) requirements for the use of electronic test equipment.

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 using test equipment. 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 using test equipment
 - electronic test equipment specified in maintenance documentation
 - items of test equipment appropriate for the required testing.

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.

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