



Australian Government

**Assessment Requirements for MEM27018
Test, diagnose and rectify mobile and
stationary plant external monitoring and
control systems**

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Modification History

Release 1: New unit

Performance Evidence

Evidence required to demonstrate competence in this unit must be relevant to and satisfy the requirements of the elements and performance criteria on at least two (2) occasions and include:

- following work instructions, standard operating procedures (SOPs) and safe work practices
- identifying and interpreting information on external monitoring and control systems from multiple sources, including manufacturers' specifications, drawings, information provided by equipment operators, log books and job records and obtaining and accessing other relevant data manually or by electronic means on mobile plant and equipment performance
- identifying hazards associated with mobile plant and equipment and implementing appropriate risk control measures and procedures before undertaking testing procedures
- establishing correct connection of test equipment to on-board access points
- running of diagnostic programs and other tests to system manufacturer specifications
- interpreting test results for equipment condition and faults
- undertaking root cause analysis to identify cause of faults
- rectifying faults using appropriate rectification strategy, including repair, replacement, changing program settings or referral to engineering, technical or other personnel
- undertaking calculations and numerical operations associated with advanced equipment testing and diagnostics on mobile plant and equipment
- documenting all findings and outcomes in accordance with SOPs.

Knowledge Evidence

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

- safe work practices and procedures and use of personal protective equipment (PPE)
- equipment system components and locations for:
 - acquisition of engine and other equipment systems real time operational data
 - data logging features, where fitted, for:
 - event list
 - system snapshot

- trend and cumulative data
- data transmission and reception to on-board and external sensors and electronic control modules
- system power
- fieldbus data Links to other on board systems and electronic control modules (ECMs)
- system login procedures for operation and maintenance access levels
- on-board access points for test equipment
- correct fixing/mounting procedures for sensors, transmitters and receivers, antennae, aerials and satellite dishes
- procedures for running diagnostic programs and tests at equipment and component level
- sources of information available to assist in fault finding
- uses and parameters of information management systems
- required rectification for equipment faults
- practices and procedures in root cause analysis
- equipment performance specifications
- documentation requirements.

Assessment Conditions

- Assessors must:
 - have vocational competency in testing, diagnosing and rectifying mobile and stationary plant external monitoring and control systems at least to the level being assessed with relevant industry knowledge and experience
 - satisfy the assessor requirements in the *Standards for Registered Training Organisations 2015* or its replacement and comply with the *National Vocational Education and Training Regulator Act 2011*, its replacement or equivalent legislation covering VET regulation in a non-referring state/territory as the case requires
- Where possible assessment must occur in operational workplace situations. Where this is not possible or where personal safety or environmental damage are limiting factors, assessment must occur in a sufficiently rigorous simulated environment that reflects realistic operational workplace conditions. This must cover all aspects of workplace performance, including environment, task skills, task management skills, contingency management skills and job role environment skills
- Conditions for assessment must include access to all tools, equipment, materials and documentation required, including relevant workplace procedures, product and manufacturing specifications
- 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.

Links

Companion Volume implementation guides are found in VETNet -

<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=b7050d37-5fd0-4740-8f7d-3b7a49c10bb2>