



Australian Government

MEM18016 Analyse plant and equipment condition monitoring results

Release: 2

MEM18016 Analyse plant and equipment condition monitoring results

Modification History

Release 2. Quantum of hours of workplace practice removed. Supersedes and is equivalent to MEM18016 Analyse plant and equipment condition monitoring results (Release 1).

Release 1. Supersedes and is equivalent to MEM18016B Analyse plant and equipment condition monitoring results.

Application

This unit of competency defines the skills and knowledge required to analyse condition monitoring results and develop recommendations based on the analysis. The data analysed is generated by a continuous plant and equipment condition monitoring program.

Where production of formal reports is required unit MEM16010 Write reports should also be selected.

Where production of reports of a technical nature is required unit MEM16014 Report technical information should also be selected.

Where equipment condition monitoring and recording only is required to be performed then unit MEM18010 Perform equipment condition monitoring and recording should be selected.

No licensing, legislative or certification requirements apply to this unit at the time of publication.

Band: B

Unit Weight: 4

Pre-requisite Unit

MEM09002	Interpret technical drawing
MEM11011	Undertake manual handling
MEM12003	Perform precision mechanical measurement
MEM12023	Perform engineering measurements
MEM12024	Perform computations
MEM12025	Use graphical techniques and perform simple statistical computations
MEM13015	Work safely and effectively in manufacturing and engineering

MEM14006	Plan work activities
MEM16006	Organise and communicate information
MEM18001	Use hand tools
MEM18002	Use power tools/hand held operations
MEM18003	Use tools for precision work
MEM18006	Perform precision fitting of engineering components
MEM18055	Dismantle, replace and assemble engineering components

Competency Field

Maintenance and diagnostics

Elements and Performance Criteria

Elements describe the essential outcomes.		Performance criteria describe the performance needed to demonstrate achievement of the element.	
1	Determine job requirements	1.1	Follow standard operating procedures (SOPs)
		1.2	Comply with work health and safety (WHS) requirements at all times
		1.3	Use appropriate personal protective equipment (PPE) in accordance with SOPs
		1.4	Identify job requirements from specifications, drawings, job sheets or work instructions
2	Analyse condition monitoring results	2.1	Examine and analyse records/graphs/results of condition monitoring and identify problem areas
		2.2	Undertake necessary calculations/computations to determine indications of malfunction or impending failure
		2.3	Undertake appropriate reports/determinations of analyses to prescribed site SOPs

Elements describe the essential outcomes.

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

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| 3 | Develop recommendations | 3.1 | Develop recommendations based on previous history, results, specifications and any relevant legislative requirements |
| | | 3.2 | Report recommendations to appropriate authority |

Foundation Skills

This section describes those required skills (reading, writing, oral communication and numeracy) that are essential to workplace performance in this unit of competency.

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

Range of Conditions

No range of conditions provided for this unit.

Unit Mapping Information

Release 2. Supersedes and is equivalent to MEM18016 Analyse plant and equipment condition monitoring results (Release 1).

Release 1. Supersedes and is equivalent to MEM18016B Analyse plant and equipment condition monitoring results.

Links

Companion Volume implementation guides are found in VETNet -

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

Assessment Requirements for MEM18016 Analyse plant and equipment condition monitoring results

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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
- obtaining results of condition monitoring of plant and equipment and examining and analysing records/graphs/results and identifying areas of concern
- determining indications of malfunctions or impending failure by performing calculations to analyse condition monitoring data
- reporting recommendations to the appropriate authority 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)
- operational specifications of the plant/equipment being monitored and any trends and/or deviations
- numerical operations and calculations/formulae for data analysis within the scope of this unit
- procedures for reporting the analysis of condition monitoring data
- previous history of the plant/equipment being monitored
- relevant legislative requirements
- recommendations and reasons with respect to action to be taken
- expected effect of the recommendations on the operational performance of the plant/equipment
- procedures for reporting recommendations and authority/person to whom the recommendations are to be made.

Assessment Conditions

- Assessors must:

- have vocational competency in analysing plant and equipment conditioning monitoring results 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.
- Assessment must occur in a functioning workplace. Where assessment in the workplace would be unsafe, impractical or threatens the environment, assessment must occur in a sufficiently rigorous simulated environment that reflects the circumstances that would be experienced in a functioning workplace. Assessment must cover all aspects of workplace performance, including 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.

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