



Australian Government

Department of Education, Employment and Workplace Relations

MEM18016B Analyse plant and equipment condition monitoring results

Release: 1

MEM18016B Analyse plant and equipment condition monitoring results

Modification History

Not Applicable

Unit Descriptor

Unit descriptor	This unit covers analysing condition monitoring results and developing recommendations based on the analysis. The data analysed is generated by a continuous plant and equipment condition monitoring program.
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Application of the Unit

Application of the unit	This unit is intended to apply to the analysis of data generated by a continuous plant and equipment condition monitoring program. The analysis of condition monitoring and production of recommendations is undertaken autonomously. Recommendations may be in writing or verbal. If production of formal reports is required, then appropriate communication units should be accessed. Band: B Unit Weight: 4
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Licensing/Regulatory Information

Not Applicable

Pre-Requisites

Prerequisite units		
Path 1	MEM09002B	Interpret technical drawing
	MEM12003B	Perform precision mechanical

Prerequisite units		
		measurement
	MEM12023A	Perform engineering measurements
	MEM12024A	Perform computations
	MEM12025A	Use graphical techniques and perform simple statistical computations
	MEM18001C	Use hand tools
	MEM18002B	Use power tools/hand held operations
	MEM18003C	Use tools for precision work
	MEM18006C	Repair and fit engineering components
	MEM18010C	Perform equipment condition monitoring and recording
	MEM18055B	Dismantle, replace and assemble engineering components

Employability Skills Information

Employability skills	This unit contains employability skills.
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Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.	Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.
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Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Analyse condition monitoring results	1.1.Records/graphs/results of condition monitoring are examined and analysed and problem areas are identified. 1.2.Necessary calculations/computations are undertaken. 1.3.Appropriate reports/determinations of analyses are undertaken to prescribed site procedure.
2. Develop recommendations	2.1.Recommendations are developed based on previous history, results, specifications and legislative requirements. 2.2.Recommendations are reported to appropriate authority.

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

Required skills

Look for evidence that confirms skills in:

- obtaining results of condition monitoring of plant/equipment
- performing calculations to analyse condition monitoring data
- preparing reports based on the analysis of the condition monitoring data
- reporting recommendations to the appropriate authority
- orally reporting routine information

Required knowledge

Look for evidence that confirms knowledge of:

- the operational specifications of the plant/equipment being monitored
- any trends and/or deviations from operational specifications
- numerical operations and calculations/formulae for data analysis within the scope of this unit
- the reasons for undertaking the identified calculations
- the procedures for reporting the analysis of condition monitoring data
- the previous history of the plant/equipment being monitored
- any relevant legislative requirements

REQUIRED SKILLS AND KNOWLEDGE

- the operational specifications of the plant/equipment
- the recommendations with respect to action to be taken
- the reasons for the recommendations made
- the expected effect of the recommendations on the operational performance of the plant/equipment
- the procedures for reporting recommendations
- the authority/person to whom the recommendations are to be made

Evidence Guide

EVIDENCE GUIDE

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

Overview of assessment

A person who demonstrates competency in this unit must be able to analyse plant and equipment condition monitoring results. Competency in this unit cannot be claimed until all prerequisites have been satisfied.

Critical aspects for assessment and evidence required to demonstrate competency in this unit

Assessors must be satisfied that the candidate can competently and consistently perform all elements of the unit as specified by the criteria, including required knowledge, and be capable of applying the competency in new and different situations and contexts.

Context of and specific resources for assessment

This unit may be assessed on the job, off the job or a combination of both on and off the job. Where assessment occurs off the job, that is the candidate is not in productive work, then an appropriate simulation must be used where the range of conditions reflects realistic workplace situations. The competencies covered by this unit would be demonstrated by an individual working alone or as part of a team. The assessment environment should not disadvantage the candidate.

This unit could be assessed in conjunction with any other units addressing the safety, quality, communication, materials handling, recording and reporting associated with analysing plant and equipment condition monitoring results or other units requiring the exercise of the skills and knowledge covered by this unit.

Method of assessment

Assessors should gather a range of evidence that is valid, sufficient, current and authentic. Evidence can be gathered through a variety of ways including direct observation, supervisor's reports, project work, samples and questioning. Questioning techniques should not require language, literacy and numeracy skills beyond those required in this unit of competency. The candidate must have access to all tools, equipment, materials and documentation required. The candidate must be permitted to refer to any relevant workplace procedures, product and manufacturing specifications, codes, standards, manuals and reference materials.

EVIDENCE GUIDE**Guidance information for
assessment****Range Statement****RANGE STATEMENT**

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

Unit Sector(s)

Unit sector	
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Co-requisite units

Co-requisite units		

Competency field

Competency field	Maintenance&diagnostics
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