



Australian Government

Department of Education, Employment and Workplace Relations

PMASUP345A Monitor vibration

Revision Number: 1

PMASUP345A Monitor vibration

Modification History

Not applicable.

Unit Descriptor

Unit descriptor	This unit covers undertaking condition monitoring.
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Application of the Unit

Application of the unit	<p>This unit applies where specialist monitoring activities are undertaken as part of a preventive maintenance or total productive maintenance plan or program.</p> <p>Work is undertaken autonomously or as part of a team environment.</p> <p>Monitoring is undertaken in workshop, laboratory or in situ environment; readings are undertaken to the accuracy of monitoring equipment limitations or to site specifications where applicable.</p> <p>Results are recorded/plotted to predetermined procedure and technique. All work and work procedures are undertaken to standard operating procedures and/or equipment manufacturer recommendations.</p> <p>All work and work practices are undertaken to regulatory or legislative requirements.</p>
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Licensing/Regulatory Information

Not applicable.

Pre-Requisites

Prerequisite units	
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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. Undertake condition monitoring.	1.1.Principles and methods of equipment condition monitoring are understood and applied 1.2.Appropriate condition monitoring technique is selected to achieve required outcomes. 1.3.Checks are undertaken correctly, safely and to standard operating procedures. 1.4.Results are plotted and deviations from specification are reported to appropriate authority and recorded.

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This describes the essential skills and knowledge and their level, required for this unit.

Required skills

- recording results
- preparing and submitting deviation reports.

Required knowledge

Look for evidence that confirms knowledge of:

- the application of principles and methods for a variety of situations
- appropriate records for a variety of situations
- hazards and control measures associated with equipment monitoring, including housekeeping
- use and application of personal protective equipment
- safe work practices and procedures

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, the Range Statement and the Assessment Guidelines for the Training Package.

Overview of assessment

Assessment of this unit should include demonstrated competence on actual plant and equipment in a work environment. The unit will be assessed in as holistic a manner as is practical and may be integrated with the assessment of other relevant units of competency. Assessment will occur over a range of situations which will include a range of problems, problem causes and environments.

Simulation may be required to allow for assessment of parts of this unit. Simulation should be based on the actual problems and should include the use of case studies/scenarios and role plays.

This unit of competency requires a significant body of knowledge which will be assessed through questioning and the use of what-if scenarios.

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

Competence must be demonstrated in the ability to define and analyse the problem as well as deal with the stakeholders. The stakeholders should be satisfied with the solution, as well as the solution being technically sound.

Consistent performance should be demonstrated. In particular look to see that:

- early warning signs of equipment/processes needing attention or with potential problems are recognised
- the range of possible causes can be identified and analysed and the most likely cause determined
- appropriate action is taken to ensure a timely return to full performance
- obvious problems in related plant areas are recognised and an appropriate contribution made to their solution.

These aspects may be best assessed using a range of scenarios/case studies/what-ifs as the stimulus with a walk through forming part of the response. These assessment activities should include a range of

EVIDENCE GUIDE	
	problems, including new, unusual and improbable situations, which may have been generated from the past incident history of the equipment, incidents on similar equipment around the world, hazard analysis activities and similar sources.
Context of and specific resources for assessment	As a general rule assessment will require access to an operating plant over an extended period of time, or a suitable method of gathering evidence of operating competence over a range of situations. A bank of scenarios/case studies/what-ifs will be required as will a bank of questions which will be used to probe the reasoning behind the observable actions.
Method of assessment	In all plants it may be appropriate to assess this unit concurrently with relevant teamwork and communication units.
Guidance information for assessment	Assessment processes and techniques must be culturally appropriate and appropriate to the oracy, language and literacy capacity of the assessee and the work being performed.

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. Add any 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.

Codes of practice/ standards	Where reference is made to industry codes of practice, and/or Australian/international standards, the latest version must be used.
Context	This unit of competency includes monitoring equipment, including: <ul style="list-style-type: none"> • built-in systems (software and site displays) • portable meters or devices • vibration monitors • infra-red and ultra-violet, non-destructive testing
Health, safety and environment (HSE)	All operations to which this unit applies are subject to stringent health, safety and environment requirements, which may be imposed through State or Federal legislation, and these must not be compromised at any time. Where there is an apparent conflict between Performance Criteria and HSE requirements, the HSE requirements take precedence.

Unit Sector(s)

Unit sector	Operational/technical
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Competency field

Competency field	
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Co-requisite units

Co-requisite units		
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