



Australian Government

Department of Education, Employment and Workplace Relations

RIISAM207A Apply operational maintenance skills

Release: 1

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Modification History

Not applicable.

Unit Descriptor

This unit covers the application of operational maintenance skills in resources and infrastructure industries. It includes: selecting, using and caring for tools; identifying and responding to basic faults in mechanical and electrical systems; and identifying, selecting and using fasteners.

Application of the Unit

This unit is appropriate for those working in operational, service, maintenance and trade support roles, at worksites within:

- Civil construction
- Coal mining
- Drilling
- Extractive industries
- Metalliferous mining

Licensing/Regulatory Information

Refer to Unit Descriptor.

Pre-Requisites

Not applicable.

Employability Skills Information

This unit contains employability skills.

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. Select, use and care for tools	1.1. Access, interpret and apply compliance documentation relevant to the application of operational maintenance skills 1.2. Correctly identify and obtain tools required for the work 1.3. Inspect and prepare tools for use 1.4. Use tools correctly and safely for their intended purpose 1.5. Identify and respond to tool maintenance requirements in accordance with manufacturer's instructions and work procedures 1.6. Clean tools after use and return/store in accordance with site procedures and practices
2. Identify and respond to basic faults in mechanical systems	2.1. Apply site safety information and procedures, including isolation procedures, when working with mechanical systems 2.2. Identify general components of mechanical systems , and their functions 2.3. Apply techniques to identify and respond to faults 2.4. Rectify or refer faults to others in accordance with site procedures
3. Identify and respond to basic faults in electrical systems	3.1. Apply site safety principles and procedures, including isolation procedures, when working with electrical systems 3.2. Identify components and functions of basic electrical circuitry 3.3. Apply techniques to identify and respond to faults 3.4. Rectify or refer faults to others in accordance with site procedures
4. Identify, select and use fasteners	4.1. Apply site safety systems and procedures, including isolation procedures, when working with fasteners 4.2. Correctly identify fasteners and match with the work requirements 4.3. Use/apply fasteners in accordance with

	manufacturer's instructions and site procedures/practices 4.4.Dispose of discarded materials in accordance with site procedures
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Required Skills and Knowledge

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

Required skills

Specific skills are required to achieve the performance criteria in this unit, particularly for the application in the various circumstances in which this unit may be applied. This includes the ability to carry out the following as required to apply operational maintenance skills:

- apply legislative, organisation and site requirements and procedures
- apply operational safety requirements
- access and interpret manufacturer's and site technical information
- match tools with work needs
- apply site isolation procedures
- respond to faults
- diagnose basic faults
- complete reporting systems
- comply with environmental requirements

Required knowledge

Specific knowledge is required to achieve the Performance Criteria of this unit, particularly its application in a variety of circumstances in which the unit may be used. This includes knowledge of the following, as required to apply operational maintenance skills:

- types and uses of oils, greases, hydraulic fluids, brake fluid and other commonly used servicing materials
- site isolation procedures
- site operational and safety procedures
- site procedures relating to operational maintenance
- site maintenance systems and procedures
- types, characteristics, uses and limitations of hand tools
- types, characteristics, uses and limitations of measuring devices
- hand tool maintenance, care and storage procedures
- types, characteristics, uses and limitations of power tools
- power tool maintenance, care and storage procedures
- the functions of major components of common mechanical systems
- the functions of major components of common hydraulic systems
- the functions of major components of common pneumatic systems
- the functions of major components of common lubrication systems
- basic diagnostic processes/techniques of mechanical systems
- major components within common electrical systems
- electrical system basic circuit diagnostic processes and techniques

- types, uses, grades and limitations of fasteners
- environmental constraints and requirements related to operational maintenance

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	
Critical aspects for assessment and evidence required to demonstrate competency in this unit	The evidence required to demonstrate competency in this unit must be relevant to worksite operations and satisfy all of the requirements of the performance criteria, required skills and knowledge and the range statement of this unit and include evidence of the following: • knowledge of the requirements, procedures and instructions for applying operational maintenance skills • implementation of requirements, procedures and techniques for the safe, effective and efficient application of operational maintenance skills • working with others to undertake and complete the application of operational maintenance skills that meets all of the required outcomes • consistent timely application of operational maintenance skills that safely, effectively and efficiently meets the required outcomes
Context of and specific resources for assessment	• This unit must be assessed in the context of the work environment. Where personal safety or environmental damage are limiting factors, assessment may occur in a simulated environment provided it is realistic and sufficiently rigorous to cover all aspects of workplace performance, including task skills, task management skills, contingency management skills and job role environment skills. • The assessment environment should not disadvantage the participant. For example, language, literacy and numeracy demands of assessment should not be greater than those required on the job. • Customisation of assessment and delivery environment to sensitively accommodate cultural diversity. • Aboriginal people and other people from a non English speaking background may have second

	language issues. • Assessment of this competency requires typical resources normally used in the work environment. Selection and use of resources for particular worksites may differ due to site circumstances. • Where applicable, physical resources should include equipment modified for people with disabilities. • Access must be provided to appropriate learning and/or assessment support when required.
Method of assessment	This unit may be assessed in a holistic way with other units of competency. The assessment strategy for this unit must verify required knowledge and skill and practical application using more than one of the following assessment methods: • written and/or oral assessment of the candidate's required knowledge • observed, documented and/or first hand testimonial evidence of the candidate's: • implementation of appropriate requirement, procedures and techniques for the safe, effective and efficient achievement of required outcomes • consistently achieving the required outcomes • first hand testimonial evidence of the candidate's: • working with others to undertake and complete the application of operational maintenance skills
Guidance information for assessment	Consult the SkillsDMC User Guide for further information on assessment including access and equity issues.

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.

Relevant compliance documentation may include:	• legislative, organisation and site requirements and procedures • manufacturer's guidelines and specifications • Australian standards • code of practice • Employment and workplace relations legislation • Equal Employment Opportunity and Disability Discrimination legislation
Tools may include:	• hand tools: • spanners • hammers • files • screwdrivers • saws • knives • pipe cutters • power-tools: • grinders • drills • saws • jacks • hydraulic spreaders • pneumatic powered tools • measuring devices: • rulers • callipers • vernier callipers • gauges and feeler gauges
Mechanical systems may include:	• hydraulic • lubrication • pneumatic
Electrical systems may cover low	• equipment batteries

and medium voltage, and may include:	• ignition and operational circuits including lighting circuits
Fasteners may include:	• screws • bolts • staples • clamps • rivets • adhesives

Unit Sector(s)

Service and Maintenance

Competency field

Refer to Unit Sector(s).

Co-requisite units

Not applicable.