



Australian Government

MARC060 Use and care for hand and power tools

Release: 1

MARC060 Use and care for hand and power tools

Modification History

Release 1. This is the first release of this unit of competency in the MAR Maritime Training Package.

Application

This unit involves the skills and knowledge required to use and care for hand tools and air, battery and electric power tools, onboard a range of vessel.

This unit applies to people working in the maritime industry in the capacity of:

- Able Seafarer – Engine/Deck
- Integrated Rating.

Licensing/Regulatory Information

Legislative and regulatory requirements are applicable to this unit.

- This unit is one of the requirements to obtain Australian Maritime Safety Authority (AMSA) certification as an Able Seafarer - Engine/Deck or Integrated Rating and to meet regulatory requirements this unit must be delivered consistent with Marine Orders and with the relevant sections of the International Convention on Standards of Training, Certification and Watchkeeping for Seafarers (STCW).

Pre-requisite Unit

Not applicable.

Competency Field

C – Equipment Operations

Unit Sector

Not applicable.

Elements and Performance Criteria

ELEMENTS

Elements describe the essential outcomes.

PERFORMANCE CRITERIA

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

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| 1 Select appropriate tools for work | 1.1 | Work requirements are interpreted in accordance with workplace procedures and manufacturer instructions |
| | 1.2 | Appropriate hand and power tools are selected for required tasks |
| | 1.3 | Selected hand and power tools are checked for serviceability in accordance with workplace procedures |
| | 1.4 | Defective tools are identified, reported and appropriate repair or replacement action is taken in accordance with workplace procedures |
| | 1.5 | Blunt or worn tools are identified and appropriate action is taken to replace, sharpen or rectify in accordance with workplace procedures and manufacturer instructions |
| | 1.6 | Instructions for the use of tools are accessed and interpreted, as required, in accordance with workplace procedures |
| 2 Use hand and power tools | 2.1 | Work area, work pieces and tools are prepared for required tasks in accordance with workplace procedures |
| | 2.2 | Other personnel in work area are made aware of work being carried out as required by safety management procedures |
| | 2.3 | Work is marked out using appropriate marking out tools in accordance with workplace procedures |
| | 2.4 | Hand and power tools are used as directed in accordance with workplace procedures and manufacturer instructions |
| | 2.5 | Desired work outcomes are achieved to job specifications in accordance with workplace procedures |
| 3 Follow safety and hazard control procedures | 3.1 | Required safety precautions are followed when using hand and power tools in accordance with workplace procedures and regulations |
| | 3.2 | Operational hazards are identified when using hand and power tools and action is taken to minimise or eliminate risk to self, other personnel, the vessel and the environment |
| 4 Care for hand and power tools | 4.1 | Tools are used for intended purpose according to manufacturer instructions in accordance with workplace |

procedures

- 4.2 Tools are cleaned and stored after use according to manufacturer instructions and in accordance with workplace procedures
- 4.3 Tools are sharpened according to manufacturer instructions and in accordance with workplace procedures
- 4.4 Tools are adjusted, tightened and/or lubricated according to manufacturer instructions in accordance with workplace procedures
- 4.5 Grinding wheels are dressed and made true according to manufacturer instructions and in accordance with workplace procedures
- 4.6 Defective or worn tools and tool components are identified, marked as required and reported, and appropriate repair or replacement action is taken in accordance with workplace procedures

Foundation Skills

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

Range of Conditions

Range is restricted to essential operating conditions and any other variables essential to the work environment.

Unit Mapping Information

This unit replaces and is equivalent to MARC030 Use and care for hand and power tools.

Links

Companion Volume implementation guide can be found in VetNet - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=772efb7b-4cce-47fe-9bbd-ee3b1d1eb4c2>

Assessment Requirements for MARC060 Use and care for hand and power tools

Modification History

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Performance Evidence

Evidence required to demonstrate competence in this unit must be relevant to and satisfy all of the requirements of the elements and performance criteria on at least one occasion and include:

- adapting to differences in vessels, equipment and standard operating procedures (SOPs)
- applying relevant work health and safety (WHS)/occupational health and safety (OHS) requirements and work practices
- caring for air-operated tools, their supply hoses and hose connections, safely and correctly
- caring for hand and power tools safely and correctly, including cleaning, sharpening or adjusting tools according to SOPs
- communicating with other workplace personnel using effective:
 - listening techniques
 - questioning to confirm understanding
 - verbal and non-verbal language
- completing work systematically with required attention to detail
- complying with relevant maritime and safety regulatory requirements
- dressing and truing a grinding wheel
- following required work schedule according to company requirements
- following the orders and instructions of the officer of the watch or designated supervisor
- marking out work to specifications, measuring and checking the quality of finished work, including the correct use of:
 - adjustable gauge
 - callipers
 - centre punch hammers
 - dividers
 - rules and tapes
 - scribes
 - squares
 - trammels
 - vernier callipers and micrometer
- reading, interpreting and applying documentation that includes technical specificity, including:
 - basic instructions and SOPs

- work specifications and drawings
- recognising routine problems that may occur when using and caring for hand and power tools, including identifying:
 - glazed, loaded or untrue grinding wheel condition
 - hand and power tools that are found to be defective or worn
 - incidents and problems involving the use of hand and power tools
- selecting appropriate hand and power tools to complete assigned tasks
- storing tools and equipment after use according to SOPs
- taking appropriate action to promptly report incidents, problems and hazards, including equipment faults
- using personal protective equipment (PPE), including:
 - boots
 - eye and ear protection
 - masks
- using tools and equipment safely according to:
 - International Safety Management (ISM) Code and associated vessel safety management system (SMS) and procedures
 - tool manufacturer instructions
 - WHS/OHS regulations and hazard prevention policies and procedures
 - workplace procedures and housekeeping processes
- working safely and collaboratively with others when using and caring for hand and power tools.

Knowledge Evidence

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

- appropriate selection of PPE
- characteristics and identifying features of common engineering drill bits
- environmental protection measures when carrying out basic engineering tasks
- established procedures for the use and care of hand or power tools required for work tasks
- hazards and related safety precautions when using hand or power tools onboard a vessel, including:
 - electric shock
 - moving and rotating blades and attachments
 - non-compliance with safe working procedures
 - poor housekeeping procedures
 - sharp blades
 - sparks in areas where flammable and explosive substances are stored
 - unsecured machinery, components or equipment
 - using tools beyond safe working limits or faulty equipment

- ISM Code and safety management procedures as they relate to the use of hand and power tools onboard a vessel
- procedures for dressing and/or truing a grinding wheel
- procedures for identifying a glazed, loaded or untrue grinding wheel condition
- relevant WHS/OHS and pollution control legislation and policies, including the International Convention for the Prevention of Pollution from Ships (MARPOL)
- standard procedures for marking out work to specifications and measuring and checking the quality of finished work.

Assessment Conditions

Assessors must hold credentials specified within the Standards for Registered Training Organisations current at the time of assessment.

Assessment must satisfy the Principles of Assessment and Rules of Evidence and all regulatory requirements included within the Standards for Registered Training Organisations current at the time of assessment.

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.

Practical assessment must occur in a workplace, or realistic simulated workplace, under the normal range of workplace conditions.

Simulations and scenarios may be used where situations cannot be provided in the workplace or may occur only rarely, in particular for situations relating to emergency procedures and adverse weather conditions where assessment would be unsafe, impractical or may lead to environmental damage.

Resources for assessment must include access to:

- applicable documentation, such as legislation, regulations, codes of practice, workplace procedures and operational manuals
- tools, equipment, machinery, materials and relevant personal protective equipment (PPE) currently used in industry.

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