



Australian Government

Department of Education, Employment and Workplace Relations

LMFCP3004A Maintain and repair barrels

Revision Number: 1

LMFCP3004A Maintain and repair barrels

Modification History

Not applicable.

Unit Descriptor

Unit descriptor	This unit specifies the outcomes required for the maintenance and repair of barrels, and includes the preparation, inspection, disassembly, cleaning, repair and restoration of barrels.
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Application of the Unit

Application of the unit	This unit supports the attainment of skills and knowledge required for competent workplace performance of advanced coopering operations. This unit may apply to a factory or an on-site environment and involves application of skills and knowledge at a trade skills level. These skills and knowledge are to be used within the scope of the individual's job and authority.
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Licensing/Regulatory Information

Not applicable.

Pre-Requisites

Prerequisite units	Nil	

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. Identify and confirm maintenance requirements	1.1. Applicable OHS, legislative and organisational requirements relevant to cooping operations are verified and complied with 1.2. Work order is reviewed, confirmed and clarified with appropriate personnel 1.3. Barrel is disassembled as necessary to provide inspection access 1.4. Barrel is cleaned of build-up materials or other matter which may inhibit inspection 1.5. Barrel is tested, inspected and evaluated for faults 1.6. Further maintenance and repair requirements are identified and/or confirmed
2. Prepare for maintenance and repair	2.1. Maintenance and repair requirements are analysed and procedures are determined for checking quality at each stage of the process 2.2. Tools, equipment, materials and components required for the maintenance and repair are selected, sourced and prepared for use 2.3. Disassembly required for maintenance and repair is completed 2.4. Barrel and components are cleaned internally and externally
3. Complete maintenance and repair activities	3.1. Faulty parts and components are replaced 3.2. Leakage faults are repaired by the appropriate means 3.3. Barrel is re-assembled and refired 3.4. Barrel is tested and inspected to confirm the effectiveness of repairs 3.5. Cleaning and sterilisation processes relevant to the work circumstances are selected and applied 3.6. Barrel is finished, fully restored and prepared for use
4. Clean work area/s and maintain equipment	4.1. Faulty and/or defective equipment is tagged and reported in accordance with workplace procedures 4.2. Waste and scrap is removed following workplace procedures 4.3. Tools and equipment used is cleaned; inspected for serviceable condition and stored appropriately in accordance with workplace procedures 4.4. Equipment and work area clean-up is maintained in

ELEMENT	PERFORMANCE CRITERIA
	accordance with workplace procedures 4.5. <i>Records and reports</i> are completed to workplace requirements

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

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

Required skills

- collect, organise and understand information related to work orders, basic plans and safety procedures
- communicate ideas and information to enable confirmation of work requirements and specifications, coordination of work with site supervisor, other workers and customers, and the reporting of work outcomes and problems
- work with others and in a team by recognising dependencies and using cooperative approaches to optimise work flow and productivity
- use pre-checking and inspection techniques to ensure the tools are serviceable and ready to use
- identify and analyse faults in barrels
- select and apply the most appropriate barrel maintenance and repair techniques
- recognise and respond to circumstances outside instructions or personal competence
- plan and organise activities including the preparation and layout of own worksite and the obtaining and use of tools and materials to avoid any backtracking, work flow interruptions or wastage
- use mathematical ideas and techniques to correctly complete measurements, calculate area and volume, and estimate other material requirements
- clarify and confirm work instructions
- plan own work within the given task parameters
- accept responsibility for given tasks
- set, monitor and satisfy personal work goals
- satisfy the competency requirements for the job
- maintain current knowledge of tools and materials
- maintain current knowledge of coopering techniques
- seek learning opportunities
- use workplace technology related to the maintenance and repair of barrels, including hand and power tools, calculators and measuring devices

Required knowledge

- State or Territory OHS legislation, regulations, standards and codes of practice relevant to the full range of processes for coopering operation
- barrel construction terminology and techniques
- barrel firing/toasting techniques
- barrel repair terminology and techniques
- the impact of firing on wine characteristics
- organisational and site standards, requirements, policies and procedures for

REQUIRED SKILLS AND KNOWLEDGE

coopering

- types of coopering tools and equipment and procedures for their safe use, operation and maintenance
- characteristics of timber, timber products and defects
- coopering components standard shapes and forms
- environmental protection requirements relating to the disposal of waste material
- established communication channels and protocols
- problem identification and resolution
- set up and operation of machining equipment
- storage systems and labelling
- procedures for the recording, reporting and maintenance of workplace records and information

appropriate mathematical procedures for estimation and measurement

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.

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

- Read and interpret a work/job specification
- Clean a barrel using both hand and machine methods
- Repair a leakage fault
- Replace a range of faulty component parts
- Comply with legislation, regulations, standards, codes of practice and established safe practices and procedures for cooeping operations
- Communicate effectively and work safely with others in the work area

Context of, and specific resources for assessment

- The application of competency is to be assessed in the workplace or realistically simulated workplace
- Assessment is to occur under standard and authorised work practices, safety requirements and environmental constraints
- Assessment of essential underpinning knowledge, other than confirmatory questions, will usually be conducted in an off-site context
- Assessment is to comply with relevant regulatory or Australian Standards requirements
- The following resources should be made available:
 - workplace location or simulated workplace
 - materials and equipment relevant to the maintenance and repair of barrels
 - specifications and work instructions

Method of assessment

Assessment must satisfy the endorsed assessment guidelines of the Furnishing Industry Training Package

Assessment methods must confirm consistency and accuracy of performance (over time and in a range of workplace relevant contexts) together with application of underpinning knowledge

Assessment methods must be by direct observation of tasks and include questioning on underpinning knowledge to ensure its correct interpretation and application

Assessment may be applied under project related conditions (real or simulated) and require evidence of

EVIDENCE GUIDE

	<p>process</p> <p>Assessment must confirm a reasonable inference that competency is able not only to be satisfied under the particular circumstance, but is able to be transferred to other circumstances</p> <p>Assessment may be in conjunction with assessment of other units of competency</p>
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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.

OHS requirements	<ul style="list-style-type: none"> are to be in accordance with Commonwealth, State or Territory legislation and regulations, organisational safety policies and procedures. Requirements may include but not be limited to the use of personal protective equipment and clothing, fire fighting equipment, first aid equipment, hazard and risk control and elimination of hazardous materials and substances, manual handling, including lifting and carrying
Legislative requirements	<ul style="list-style-type: none"> are to be in accordance with applicable legislation from all levels of government that affect organisational operation. Requirements may include but not be limited to award and enterprise agreements, industrial relations, Australian Standards, confidentiality and privacy, OHS, the environment, equal opportunity, anti-discrimination, relevant industry codes of practice, duty of care and heritage
Organisational requirements	<ul style="list-style-type: none"> may include but not be limited to legal, organisational and site guidelines, policies and procedures relating to own role and responsibility, quality assurance, procedural manuals, quality and continuous improvement processes and standards, OHS, emergency and evacuation, ethical standards, recording and reporting, access and equity principles and practices, equipment use, maintenance and storage, environmental management (waste disposal, recycling and re-use guidelines)
Work order	<ul style="list-style-type: none"> is used to determine job requirements including design, tolerances, process, materials, finish and quantity
Appropriate personnel	<ul style="list-style-type: none"> may include but not be limited to supervisors, suppliers, clients, colleagues and managers

RANGE STATEMENT	
Barrel	<ul style="list-style-type: none"> at this level may refer to the traditional barrel or equivalent products such as vats, casks, tubs, bars or baths
Barrel cleaning	<ul style="list-style-type: none"> is to include both hand and machine shaving of build-up and the application of authorised cleaning materials
Faults and blemishes	<ul style="list-style-type: none"> material faults include knots, sapwood, splits and shakes, rot and decay, insect infestation, mineral streak or brown stripe, broken chime, split staves, acetic or volatile barrel, mouldy barrel and water contamination manufacturing faults include head joint, stave and chime leakage wear, tear and deterioration faults include handling damage, discolouration, broken staves, buckled heads, burst heads, build up of fermentation products and contamination
Maintenance and repair requirements	<ul style="list-style-type: none"> are to include component repair and replacement, detailed cleaning and sterilisation, and testing
Tools and equipment	<ul style="list-style-type: none"> hand tools for coopering are to include, but not be limited to hand plane, chisels, hand saws, spokeshave, hammer, mallet, auger, croze, driver, knives (belly, crum, heading, hollow), cooper's hammer, maul, bradawl, adze(s), hollowing knives, shaves (hoop, inside, heading), swift, marking-out tools, files, rasps, scraper, screwdrivers and hand drill power tools for coopering are to include, but not be limited to bench grinder, presses (hoops), head making machine, drop saw, circular power saw, planer, double sided planer, drill, jig saw, CNC router, laser cutter, trimmer, biscuit machine, brad/nail and staple gun, and sanders (long belt, disk and machine)
Materials	<ul style="list-style-type: none"> are oak and may include caulking cotton, wedges, workhole pegs, tooth picks and metal wedges
Coopering Components	<ul style="list-style-type: none"> are to include heads, staves, hoops, flags or reeds, shives, wooden plugs, silicone plugs, mechanical seals, hoop nails and may include decorative features or fittings in steel, stainless steel or copper

RANGE STATEMENT	
Repair of leakage faults	<ul style="list-style-type: none"> may include plugging, caulking or re-machining
Testing	<ul style="list-style-type: none"> is to include standard hot water leakage testing
Waste	<ul style="list-style-type: none"> may include but not be limited to off-cuts, shavings and sawdust
Records and reports	<ul style="list-style-type: none"> may include but not be limited to the machining method, product type, size, inspection, grading and labelling outcomes, storage locations, quality outcomes, hazards, incidents or equipment malfunctions

Unit Sector(s)

Unit sector	Coopering
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Competency field

Competency field	
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Co-requisite units

Co-requisite units	