



Australian Government

MSFCP2004 Maintain and repair barrels

Release: 1

MSFCP2004 Maintain and repair barrels

Modification History

Release 1 - New unit of competency

Application

This unit of competency covers preparing, inspecting, disassembling, cleaning, repairing and restoring barrels. It may apply to a factory or an on-site environment

No licensing, legislative or certification requirements apply to this unit at the time of publication.

Pre-requisite Unit

Competency Field

Unit Sector

Coopering

Elements and Performance Criteria

Elements describe the essential outcomes.

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

1	Identify and confirm maintenance requirements	1.1	Applicable work health and safety (WHS), legislative and organisational requirements relevant to coopering 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	2.1	Maintenance and repair requirements are analysed and procedures are determined for checking quality at each

repair		stage of the process	
3	Complete maintenance and repair activities	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
		3.1	Faulty parts and components are replaced
		3.2	Leakage faults are repaired by the appropriate means
		3.3	Barrel is re-assembled and refired
4	Clean work area and maintain equipment	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
		4.1	Faulty and/or defective equipment is tagged and reported in accordance with workplace procedures
		4.2	Waste and scrap are removed following workplace procedures
		4.3	Tools and equipment used are cleaned, inspected for serviceable condition and stored appropriately in accordance with workplace procedures
		4.4	Equipment and work area clean-up is maintained in accordance with workplace procedures
		4.5	Records and reports are completed to workplace requirements

Foundation Skills

Foundation skills essential to performance are explicit in the performance criteria of this unit of competency. Detail on appropriate performance levels for each furnishing unit of competency in reading, writing, oral communication and numeracy utilising the Australian Core Skills Framework (ACSF) are provided in the Furnishing Training Package Implementation Guide.

Range of Conditions

Specifies different work environments and conditions that may affect performance. Essential operating conditions that may be present (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) are included. Range is restricted to essential operating conditions and any other variables essential to the work environment.

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|---------------------------------------|---|
| Unit context includes: | <ul style="list-style-type: none">• WHS requirements, including legislation, building codes, material safety management systems, hazardous and dangerous goods codes and local safe operating procedures or equivalent• work is carried out in accordance with legislative obligations, environmental legislation, relevant health regulations, manual handling procedures and organisation insurance requirements• work requires individuals to demonstrate some discretion, judgement and problem solving |
| Work order includes: | <ul style="list-style-type: none">• design• tolerances• process• materials• finish• quantity |
| Appropriate personnel include: | <ul style="list-style-type: none">• supervisors• suppliers• clients• colleagues• managers |
| Barrels include: | <ul style="list-style-type: none">• traditional barrel or equivalent products, such as:<ul style="list-style-type: none">• vats• casks• tubs• bars• baths |
| Barrel cleaning includes: | <ul style="list-style-type: none">• hand and machine shaving of build-up |

Faults and blemishes include:

- the application of authorised cleaning materials
- material faults:
 - 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
 - water contamination
- manufacturing faults:
 - head joint
 - stave and chime leakage
- wear, tear and deterioration faults:
 - handling damage
 - discolouration
 - broken staves
 - buckled heads
 - burst heads
 - build-up of fermentation products
 - contamination

Maintenance and repair requirements include:

- component repair and replacement
- detailed cleaning and sterilisation
- testing

Tools and equipment include:

- hand tools:
 - hand plane
 - chisels
 - hand saws
 - spokeshave
 - hammer
 - mallet
 - auger
 - croze
 - driver
 - knives (belly, crum, heading and hollow)
 - cooper's hammer

- maul
- bradawl
- adze(s)
- shaves (hoop, inside and heading)
- swift
- marking-out tools
- files
- rasps
- scraper
- screwdrivers
- hand drill
- power tools:
 - bench grinder
 - presses (hoops)
 - head making machine
 - drop saw
 - circular power saw
 - planer
 - double sided planer
 - drill
 - jig saw
 - computer numerically controlled (CNC) router
 - laser cutter
 - trimmer
 - biscuit machine
 - brad/nail and staple gun
 - sanders (long belt, disk and machine)

Materials include:

- solid timber
- caulking cotton
- wedges
- workhole pegs
- tooth picks
- metal wedges

Coopering components include:

- heads
- staves and hoops
- decorative features or fittings in steel, stainless steel or copper

Repair of leakage faults include:	• plugging • caulking • re-machining
Testing includes:	• standard hot water leakage testing
Waste includes:	• off-cuts • shavings • sawdust
Records and reports include:	• the machining method • product type • size • inspection • grading and labelling outcomes • storage locations • quality outcomes • hazards • incidents • equipment malfunctions
Personal protective equipment includes:	• that prescribed under legislation, regulations and enterprise policies and practices
Information and procedures include:	• workplace procedures relating to the use of tools and equipment • work instructions, including job sheets, cutting lists, plans, drawings and designs • workplace procedures relating to reporting and communication • manufacturer specifications and operational procedures

Unit Mapping Information

Supersedes and is equivalent to LMFCP3004A Maintain and repair barrels

Links

Companion Volume implementation guides are found in VETNet -

<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=0601ab95-583a-4e93-b2d4-cfb27b03ed73>

Assessment Requirements for MSFCP2004 Maintain and repair barrels

Modification History

Release 1 - New unit of competency

Performance Evidence

- Interpret work order and locate and apply relevant information
- Apply safe handling requirements for equipment, products and materials, including use of personal protective equipment
- Identify materials used in the work process
- Follow work instructions, operating procedures and inspection processes to:
 - minimise the risk of injury to self or others
 - prevent damage to goods, equipment and products
- maintain required production output and product quality
- Clean a barrel using both hand and machine methods
- Repair a leakage fault and replace a range of faulty component parts
- Use mathematical ideas and techniques to correctly complete measurements, calculate area and estimate material requirements
- Communicate ideas and information to enable confirmation of work requirements and specifications and the reporting of work outcomes and problems, interpret basic plans and follow safety procedures
- Avoid backtracking, work flow interruptions or wastage
- Work with others and in a team by recognising dependencies and using cooperative approaches to optimise work flow and productivity

Knowledge Evidence

- State or territory WHS 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 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

- Relevant 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

Assessment Conditions

- Assessors must:
 - hold training and assessment competencies as determined by the National Skills Standards Council (NSSC) or its successors
 - have vocational competency in the furnishing industry at least to the level being assessed with broad industry knowledge and experience, usually combined with a relevant industry qualification
 - be familiar with the current skills and knowledge used and have relevant, current experience in the furnishing industry.
- Assessment methods must confirm consistency of performance over time rather than a single assessment event and in a range of workplace relevant contexts.
- Assessment must be by observation of relevant tasks with questioning on underpinning knowledge and, where applicable, multimedia evidence, supervisor's reports, projects and work samples.
- Assessment is to be conducted on single units of competency or in conjunction with other related units of competency. Foundation skills are integral to competent performance in the unit and should not be assessed separately.
- Assessment must occur on the job or in a workplace simulated facility with relevant process, equipment, materials, work instructions and deadlines.
- Access is required to materials and equipment relevant to the maintenance and repair of barrels and specifications.

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