



**Australian Government**

**Department of Education, Employment and Workplace Relations**

# **LMFMI3009A Repair brass instruments**

**Revision Number: 1**

## LMFMI3009A Repair brass instruments

### Modification History

Not applicable.

### Unit Descriptor

<b>Unit descriptor</b>	This unit describes the work involved in the repair of brass instruments, including cornets, trumpets and other military brass instruments.
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### Application of the Unit

<b>Application of the unit</b>	This unit supports the attainment of skills and knowledge required for competent workplace performance in furnishing operations of all sizes. The repair of brass instruments applies to a relevant workplace environment and involves application of skills and knowledge at a tradesperson/ 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

<b>Prerequisite units</b>	Nil	

## Employability Skills Information

<b>Employability skills</b>	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. Plan for repair	<p>1.1. Applicable <i>OHS, legislative</i> and <i>organisational</i> requirements relevant to the repair of brass instruments are verified and complied with</p> <p>1.2. <i>Work order</i> is reviewed, confirmed and clarified with <i>appropriate personnel</i></p> <p>1.3. Customer requirements are received, analysed and confirmed in accordance with enterprise procedures</p> <p>1.4. Specifications are drawn up and required materials are identified in accordance with enterprise procedures</p> <p>1.5. Communication with others involved with the work is established and maintained to ensure efficient workflow coordination, personnel cooperation and safety throughout the application of this competency</p>
2. Prepare for repair	<p>2.1. Brass instrument is cleaned and examined and required repairs are determined in accordance with customer's and enterprise requirements</p> <p>2.2. Required materials for the repair of the brass instrument are acquired inspected and tested in accordance with enterprise procedures</p> <p>2.3. Required electroplating and soldering materials for the repair of the brass instrument are identified and acquired in accordance with enterprise procedures</p> <p>2.4. Tools, test and measurement instruments, consumables and other equipment required for the repair of the brass instrument are identified, selected and obtained in accordance with enterprise procedures</p>
3. Manufacture instruments	<p>3.1. Tools and equipment are applied in the repair process in accordance with professional standards and enterprise requirements</p> <p>3.2. Materials are cut, formed, bent, aligned and soldered in accordance with professional standards and enterprise requirements</p> <p>3.3. Advice and assistance is sought from others as required</p> <p>3.4. On going checks of the quality of the manufacturing process are undertaken in accordance with professional standards and practices and quality procedures</p> <p>3.5. Tests and observations are interpreted to confirm the</p>

<b>ELEMENT</b>	<b>PERFORMANCE CRITERIA</b>
	brass instrument is compliant with the specifications and professional standards
4. Finish surfaces	<p>4.1. Surface finish materials are prepared for application in accordance with repair specifications and enterprise requirements</p> <p>4.2. Repaired brass instrument surface is prepared for finishing in accordance with customer's specifications and enterprise requirements</p> <p>4.3. Repaired brass instrument surface is electroplated in accordance with customer's specifications and enterprise requirements</p> <p>4.4. On going checks of the quality of the finishing process are undertaken in accordance with professional standards and practices and quality procedures</p>
5. Finalise manufacturing processes	<p>5.1. Final checks and tests of the quality of the brass instrument are undertaken in accordance with customer's specifications, professional standards and practices and quality procedures</p> <p>5.2. Repair and other records are completed in accordance with enterprise requirements and standards</p> <p>5.3. Housekeeping is conducted in accordance with enterprise requirements and professional standards</p>

## Required Skills and Knowledge

### REQUIRED SKILLS AND KNOWLEDGE

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

#### Required skills

- Required skills
- collect, organise and understand technology and information related to brass instrument products
- communicate ideas and information to enable confirmation of work requirements and specifications, coordination of work with supervisor, other workers and customers, and the reporting of work outcomes and problems
- maintain quality records related to instrument repair
- work with others and in a team by recognising dependencies and using cooperative approaches to optimise work flow and productivity
- identify, anticipate and respond to faults in materials and/or repair components
- 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 repair techniques
- seek learning opportunities
- use the workplace technology related to the selection and assembly of repair components including computers, measuring devices and repair systems

#### Required knowledge

- State or Territory OHS legislation, regulations, standards and codes of practice relevant to the full range of processes for machining material
- organisational and site standards, requirements, policies and procedures for machining material
- environmental protection requirements relating to the disposal of waste material
- established communication channels and protocols
- problem identification and resolution
- types of tools and equipment and procedures for their safe use, operation and

**REQUIRED SKILLS AND KNOWLEDGE**

maintenance

- characteristics, capabilities and limitations of the metals traditionally used in the manufacture of brass instruments
- characteristics, capabilities and limitations of the brass instruments being repaired
- properties of electroplating and soldering materials
- 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 of evidence to be considered

- Read and interpret a work/job specification
- Effectively conduct operator maintenance on tools and equipment
- Comply with legislation, regulations, standards, codes of practice and established safe practices and procedures
- Communicate effectively and work safely with others in the work area
- Assessment must confirm appropriate knowledge and skills to:
  - safely perform repair functions
  - plan the repair of a brass instrument
  - prepare for the repair of a brass instrument
  - repair a brass instrument
  - apply the quality and professional standards required when repairing a brass instrument
  - electroplate and solder repaired components of a brass instrument
  - finalise the repair process

#### 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 repair of brass instruments
  - specifications and work instructions

#### Method of assessment

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



**EVIDENCE GUIDE**

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 process

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

Assessment may be in conjunction with assessment of other units of competency

## 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.

<b>OHS requirements</b>	<ul style="list-style-type: none"> <li>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.</li> </ul>
<b>Legislative requirements</b>	<ul style="list-style-type: none"> <li>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.</li> </ul>
<b>Organisational requirements</b>	<ul style="list-style-type: none"> <li>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)</li> </ul>
<b>Work order</b>	<ul style="list-style-type: none"> <li>is used to determine job requirements including design, tolerances, process, materials, finish and quantity</li> </ul>
<b>Appropriate personnel</b>	<ul style="list-style-type: none"> <li>may include but not be limited to supervisors, suppliers, clients, colleagues and managers</li> </ul>

<b>RANGE STATEMENT</b>	
<b>Tools and equipment</b>	<ul style="list-style-type: none"> <li>• may include but are not limited to measuring tapes or rules, hammers, mallets, squares, bevels, chisels, planes, hand saws, power saws, power drills/screwdrivers, air compressor and hoses, clamps screwdrivers, pincers,</li> </ul>
<b>Workplace environment</b>	<ul style="list-style-type: none"> <li>• may be a small, medium or large workplace</li> <li>• may be involved in the manufacture or repair of brass instruments</li> </ul>
<b>Materials</b>	<ul style="list-style-type: none"> <li>• may include various metals that are traditionally used in these instruments</li> <li>• may include electroplating and soldering materials required for different metals that comprise the components of brass instruments, including bell, valve, body, slides (trombone), mouthpiece, tuning slides, mutes, conical tubing</li> </ul>
<b>Information and procedures may include:</b>	<ul style="list-style-type: none"> <li>• Workplace procedures relating to the use and operation of tools and equipment.</li> <li>• Workplace instructions, including job sheets, plans, drawing and designs.</li> <li>• Workplace procedures relating to reporting and communication.</li> </ul>

## Unit Sector(s)

<b>Unit sector</b>	Musical Instruments
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## Competency field

<b>Competency field</b>	
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## Co-requisite units

Co-requisite units		