



**Australian Government**

# **LMFGG2008B Glaze/reglaze residential windows and doors**

**Revision Number: 1**

## LMFGG2008B Glaze/reglaze residential windows and doors

### Modification History

Not applicable.

### Unit Descriptor

<b>Unit descriptor</b>	This unit addresses the knowledge and skills required to fit glass to residential windows and doors.
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### Application of the Unit

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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. Identify work requirements	<p>1.1. Work requirements in the form of type of glass and the method of fixing are identified from work instructions</p> <p>1.2. Workplace health and safety requirements for glazing/reglazing of windows and doors, including personal protection needs, are observed throughout the work</p> <p>1.3. The process for fitting glass to window and door frames is identified</p>
2. Prepare for work	<p>2.1. Work sequence is planned in a logical order to suit the job</p> <p>2.2. Tools, equipment and materials (less glass and frames) are selected and checked prior to use to ensure that they are appropriate for the work, serviceable and in a safe condition</p> <p>2.3. Type of glass to be fitted and frames are selected to match:</p> <p>2.3.1. customer order</p> <p>2.3.2. existing glass type</p> <p>2.3.3. requirements for security, noise or light control</p> <p>2.3.4. Australian Standards</p> <p>2.4. Glass is checked for type, size and imperfections</p> <p>2.5. Glass fixing method is selected according to:</p> <p>2.5.1. specification</p> <p>2.5.2. type of glass and frame</p> <p>2.5.3. security requirements</p> <p>2.5.4. sealing methods</p> <p>2.5.5. Australian Standards</p> <p>2.6. Frame condition is assessed to ensure suitability for glazing in accordance with customer order and Australian Standards. Defective frames are reported for repair or replacement in accordance with workplace procedures</p> <p>2.7. Fixing and sealing materials are prepared by mixing or cutting to length as appropriate</p>
3. Identify site conditions and restraints	<p>3.1. On-site difficulties are recognised and action taken to resolve in accordance with regulations and workplace requirements</p>

ELEMENT	PERFORMANCE CRITERIA
	<p>3.2.Covering material is applied where necessary to protect existing fixtures and fittings</p> <p>3.3.Special characteristics of the window or door which may affect the finished job are identified and corrective action taken</p>
4. Perform glazing	<p>4.1.Frame is prepared to receive glass by:</p> <ul style="list-style-type: none"><li>4.1.1. checking size against specification</li><li>4.1.2. removing remains of glass and any sealants</li><li>4.1.3. cleaning</li><li>4.1.4. surface preparation (if required)</li></ul> <p>4.2.Glass is fixed to the frame using the selected method and in accordance with recognised industry procedures and Australian Standards</p> <p>4.3.Solvents and sealants are used in accordance with manufacturer recommendations and Australian Standards</p> <p>4.4.Excess sealing material is removed</p> <p>4.5.Glass and frame are cleaned after fixing</p>
5. Complete work	<p>5.1.Completed installation is checked to ensure compliance with customer requirements and specifications</p> <p>5.2.Tools, equipment and materials are cleaned and stored following workplace procedures</p> <p>5.3.Work area is cleaned and left in a safe condition and rubbish disposed of as appropriate</p> <p>5.4.Waste and scrap materials are removed for disposal or recycling as required</p> <p>5.5.Workplace documentation is completed in accordance with workplace requirements</p>

## 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 work supervisor, other workers and customers, and the reporting of work outcomes and problems
- plan and organise activities including the preparation and layout of the work area and the obtaining of equipment and materials to avoid any back tracking, workflow interruptions or wastage
- work with others and in a team by recognising dependencies and using cooperative approaches to optimise workflow and productivity
- use mathematical ideas and techniques to correctly complete measurements, calculate work requirements, optimise glass sizes for economical cutting and assemble required materials
- use pre-checking and inspection techniques to plan work, avoiding re-working and wastage
- use the limited workplace technology related to the glazing of simple window and door frames

#### Required knowledge

- the qualities and characteristics of glass, including the hazards and handling requirements
- the techniques, methods, materials and process of glazing simple/complex window and door frames
- workplace safety system requirements related to the glazing simple/complex window and door frames
- relevant Australian Standards
- workflow in relation to fitting glass
- characteristics, purpose and operation of tools and equipment used in glazing simple/complex window and door frames
- identification of equipment, processes and procedures

## 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

- Interpret work order/job instruction and locate and apply relevant information to glaze/reglaze simple/complex windows and doors
- Apply safe handling requirements for equipment, products and materials, including use of personal protective equipment
- Follow work instructions, operating procedures and inspection practices to:
  - minimise the risk of injury to self and others
  - prevent damage to goods, equipment and products
  - maintain required production output and product quality
- Glaze the following:
  - timber putty faced and beaded window sashes, including fixed, sliding, double hung, casement and awning sashes
  - metal channel and beaded window sashes, including fixed, sliding, double hung, casement and awning sashes
  - timber putty faced and beaded doors, including fixed, sliding, hinged, pivot and bi-fold doors
  - metal channel and beaded doors, including fixed, sliding, hinged, pivot and bi-fold doors
- Include the following for each:
  - select glass thickness and type in accordance with AS1288
  - calculate glazing clearance and cutting size
  - cut glass to AS4667 Quality requirements for cut to size and processed glass
  - select glazing tools, equipment, glazing sealants, vinyls and tapes
  - prepare working area
  - prepare glazing rebates and channels prior to installation
  - clean glass, tools, equipment and work area
  - calculate the cost of glass, glazing materials and

**EVIDENCE GUIDE**

	<p>labour</p> <ul style="list-style-type: none"> <li>• Re-glaze timber and metal windows and doors, including: <ul style="list-style-type: none"> <li>• prepare work area and drop sheets</li> <li>• select reglazing tools and equipment</li> <li>• hack out/remove beads and glass safely from timber windows and doors</li> <li>• remove and disassemble metal window sashes and doors and remove glass safely</li> <li>• select glass thickness and type in accordance with AS1288</li> <li>• calculate glazing clearance and cutting size</li> <li>• cut glass to industry standards AS4667</li> <li>• select glazing tools, equipment, glazing sealants, vinyls and tapes</li> <li>• glaze timber and metal windows and doors</li> <li>• install sash cords, unique and spring balances on timber and metal double hung windows</li> <li>• clean glass, tools, equipment and work area</li> </ul> </li> <li>• Work effectively with others</li> <li>• Modify activities to cater for variations in workplace contexts and environment</li> </ul>
<b>Resource implications</b>	Frames, glass, fixing material, sealants, workplace operating procedures and work orders, personal protective equipment and an appropriate work area/site.
<b>Method of assessment</b>	<p>Assessment methods must confirm consistency of performance over time and in a range of workplace relevant contexts.</p> <p>Assessment should be by direct observation of tasks and questioning on underpinning knowledge.</p> <p>Assessment may be in conjunction with assessment of other relevant units of competency.</p>
<b>Context of assessment</b>	Assessment may occur on the job or in a workplace simulated facility with relevant glazing equipment, materials, work instructions and deadlines.



## 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.

#### Unit context

- Work is carried out in accordance with statutory requirements, environment legislation, manual handling procedures and relevant regulations and organisation insurance requirements
- OHS requirements may include legislation, standards, building codes, material safety management systems and local safe operating procedures
- Work requires individuals to demonstrate discretion, judgement and problem solving skills in the handling and installation of glass products
- Work may be performed in workplaces which are involved in on-site and off-site fabrication, installation and/or replacement of glass to commercial or residential windows, doors and other openings or to other frames

#### Glaze/re-glaze

- Involves the installation of glass to metal and/or timber doors, windows and other frames and reglazing of existing windows and doors
- Residential glazing/re-glazing is confined to simple doors and windows and may include:
  - residential windows, such as fixed, sliding, casement, awning and double hung and louveres
  - residential doors, such as sliding, hinged, pivot and bi-fold
- Glazing or reglazing for non-residential situations is addressed in commercial and architectural/engineering AQF III units

#### Types of glass may include but are not limited to:

- annealed glass
- toughened glass
- laminated glass
- wired glass

<b>RANGE STATEMENT</b>	
	<ul style="list-style-type: none"> <li>• tinted and heat reflective glass</li> <li>• coated glass and insulated glass units.</li> </ul>
<b>Tools and equipment are to include:</b>	<ul style="list-style-type: none"> <li>• tungsten wheel glass cutters</li> <li>• speed cutters</li> <li>• cutting lubricants</li> <li>• running pliers</li> <li>• straight edges and squares</li> <li>• tape measures</li> <li>• glass handling and lifting equipment</li> <li>• hack-out knives</li> <li>• chisels</li> <li>• putty knives</li> <li>• sprig/diamond guns</li> <li>• vinyl cutters and rollers</li> <li>• pry bars</li> <li>• sealant guns</li> <li>• blade and phillips head screwdrivers</li> <li>• pop rivet guns</li> <li>• electric and pneumatic drills</li> <li>• rubber mallets</li> <li>• claw hammers</li> <li>• nail punches and PPE equipment</li> </ul>
<b>Materials are to include but are not limited to:</b>	<ul style="list-style-type: none"> <li>• all forms of flat glass and acrylic glazing products</li> <li>• plastic</li> <li>• aluminium</li> <li>• steel</li> <li>• solid timber</li> <li>• gaskets</li> <li>• sealants</li> <li>• adhesives</li> <li>• glazing tapes and setting blocks</li> </ul>
<b>Methods of glazing may include:</b>	<ul style="list-style-type: none"> <li>• channel glazing</li> <li>• beaded glazing and double glazing</li> </ul>
<b>Personal protective equipment</b>	<p>Personal protective equipment is to include that prescribed under legislation, regulation and Australian Standard policies and practices. It may include:</p> <ul style="list-style-type: none"> <li>• gloves</li> </ul>

<b>RANGE STATEMENT</b>	
	<ul style="list-style-type: none"> <li>• safety glasses</li> <li>• gauntlets</li> <li>• safety footwear</li> <li>• hard hats</li> <li>• aprons and overalls</li> </ul>
<b>Information and procedures</b>	<ul style="list-style-type: none"> <li>• Workplace procedures relating to the glazing of simple windows and doorframes</li> <li>• Australian Standards AS1288, 2208, 4667, 2047, 4666</li> <li>• Equipment and material manufacturers' specifications and operational procedures</li> <li>• On-site procedures and regulations relating to the handling and movement of glass</li> <li>• Work instructions, including job sheets, plans, drawings and designs</li> <li>• Safety standards include personal protective equipment, OHS regulations and enterprise requirements</li> </ul>

## Unit Sector(s)

<b>Unit sector</b>	Glass and Glazing
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## Competency field

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

<b>Co-requisite units</b>		

