



Australian Government

Department of Education, Employment and Workplace Relations

LMFGG3013B Construct and repair leadlight panels

Revision Number: 1

LMFGG3013B Construct and repair leadlight panels

Modification History

Not applicable.

Unit Descriptor

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| Unit descriptor | This unit addresses the knowledge and skills required to construct and repair leadlight panels. |
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Application of the Unit

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| Application of the unit | |
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Licensing/Regulatory Information

Not applicable.

Pre-Requisites

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| Prerequisite units | Nil | |
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Employability Skills Information

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| Employability skills | This unit contains employability skills. |
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Elements and Performance Criteria Pre-Content

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| <p>Elements describe the essential outcomes of a unit of competency.</p> | <p>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.</p> |
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Elements and Performance Criteria

| ELEMENT | PERFORMANCE CRITERIA |
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| 1. Identify the work requirements | 1.1. Purpose of the leadlight panel is established 1.2. Performance requirement of the panel is identified in terms of safety, quality and function 1.3. Construction method and materials to be used in the panel to be constructed or repaired are identified 1.4. Leadlight panel to be repaired is inspected to identify faults 1.5. Faults found are compared with customer requirements and any previous identified faults |
| 2. Plan leadlight panel construction/repair | 2.1. Plan or design of leadlight panel to be constructed/repared is analysed to identify work requirements, methods and/or specifications 2.2. Workplace health and safety requirements for construction and repair of leadlight panels, including personal protection needs, are observed throughout the work 2.3. Work sequences are identified and a personal work plan is developed when required 2.4. Steps or stages in construction/repair are planned, noting check points for (any) measurements and tests 2.5. Approval of work construction plan is obtained as required by workplace procedures 2.6. Suitable work area is identified |
| 3. Identify suitable materials and equipment | 3.1. Tools are selected and checked prior to use to ensure that they are appropriate for the work, serviceable and in a safe condition 3.2. Leadlight construction materials are selected according to specification of performance requirements, proposed use, cost and availability of materials, if required, matching the original: <ul style="list-style-type: none"> 3.2.1. texture 3.2.2. colour 3.2.3. thickness 3.2.4. opacity 3.3. Equipment suitable for working the chosen material is identified |
| 4. Construct/repair the leadlight panel | 4.1. Plan is followed to construct/repair the leadlight panel |

| ELEMENT | PERFORMANCE CRITERIA |
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| | <p>4.2. Checks are conducted at the identified points</p> <p>4.3. Modifications are identified and recommended within workplace procedures</p> <p>4.4. Modifications to the plan are documented and appropriate approvals are sought in accordance with workplace procedures</p> |
| 5. Complete work | <p>5.1. Leadlight panel is inspected for quality of work and repaired or reconstructed as required in accordance with workplace procedures</p> <p>5.2. Material which can be reused is collected and stored</p> <p>5.3. Waste and scrap material is removed for disposal or recycling as required</p> <p>5.4. Work area is cleaned and rubbish disposed of as appropriate</p> <p>5.5. Equipment is cleaned and stored according to workplace requirements</p> <p>5.6. Workplace documentation is completed in accordance with workplace procedures</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 construction/repair of leadlight panels

Required knowledge

- end use of the panel and required safety, quality and structural standards
- characteristics, including the hazards and workplace safety system requirements associated with the materials used in leadlight panel construction
- operation of tools and equipment used in constructing/repairing leadlight panels
- processes and procedures involved in the construction/repair process
- the impact of design features of the leadlight panel on purpose, materials and construction
- relevant Australian Standards

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 to identify requirements and plan the process to construct/repair leadlight panels
- Select and use appropriate materials and processes for the panel being constructed/repared
- 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
- As a minimum, demonstrate the ability to:
 - construct leadlight panels
 - measure openings for leadlight panels
 - design, including construction of cartoon
 - construct templates
 - identify and select materials, including glass and lead came
 - cut basic and complex shapes in clear, patterned and coloured glass
 - lead up, flux and solder
 - weatherproof, cement, pick and polish
 - glaze, including putty facing and beading up
 - may include reinforcement bar installation
- Repair leadlight panels:
 - remove leadlight from opening to be repaired
 - construct templates, cartoons and rubbings
 - identify and select replacement materials
 - disassemble lead and broken glass panels
 - cut glass to suit
 - lead up, weatherproof, cement, pick and polish
 - reglaze repaired leadlight panel

| EVIDENCE GUIDE | |
|------------------------------|---|
| | <ul style="list-style-type: none"> • Work effectively with others • Modify activities to cater for variations in workplace contexts and environment |
| Resource implications | Appropriate leadlighting materials, work area, work order, specifications, tools, personal protective equipment, equipment and consumables. |
| Method of assessment | <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> |
| Context of assessment | Assessment may occur on the job or in a workplace simulated facility with relevant leadlight construction/repair 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 requires individuals to demonstrate discretion, judgement and problem solving skills in the construction/repair of leadlight panels
- Work involves measuring, design and selection of materials and tools, and assembly, weatherproofing and polishing of leadlight panels
- Work involves removal, disassembling, selection of replacement materials, and assembly, weatherproofing, polishing and glazing of repaired leadlight panels
- 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 is generally performed individually, with general supervision and may be part of a production process

Repair methods may include:

- releading
- Dutchman's repair and lead lifting

Tools and equipment may include:

- timber benches
- light boxes
- glass grinders
- lead knives
- lead vice
- lathekins
- farrier's nails
- glass cutters
- grozing and small running pliers

| RANGE STATEMENT | |
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| | <ul style="list-style-type: none"> • soldering irons and bits • suede • cleaning and polishing brushers and pickers |
| Materials are to include but are not limited to: | <ul style="list-style-type: none"> • coloured/plain glass panels • patterns/templates • timber lathes • ornamental fittings • lead came • solder and fluxes |
| Occupational Health and Safety | <p>OHS requirements may address:</p> <ul style="list-style-type: none"> • material handling • work processing • work space and ventilation considerations • material disposal processes |
| Personal protective equipment | <p>Personal protective equipment is to include that prescribed under legislation, regulations and enterprise practices and procedures. It may include:</p> <ul style="list-style-type: none"> • glass handling gloves • safety glasses |
| Information and procedures | <ul style="list-style-type: none"> • Workplace procedures relating to constructing/repairing leadlight panels • Workplace procedures relating to the handling and movement of glass and glass panels • Equipment manufacturers' specifications and operational procedures • Work instructions, including job sheets, cutting lists, plans, patterns, templates, drawings and/or designs • Safety standards include personal protective equipment, OHS regulations and enterprise requirements • Quality and Australian Standards and procedures |

Unit Sector(s)

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| Unit sector | Glass and Glazing |
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Competency field

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| Competency field | |
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Co-requisite units

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| Co-requisite units | | |
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