



**Australian Government**

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

# **CPCPGS3022A Maintain Type A gas appliances**

**Release: 1**

## **CPCPGS3022A Maintain Type A gas appliances**

### **Modification History**

Not Applicable

### **Unit Descriptor**

**Unit descriptor** This unit of competency specifies the outcomes required to perform basic maintenance on Type A gas appliances.

### **Application of the Unit**

**Application of the unit** Site location for work application may be either domestic or commercial, and may be a new work site or an existing structure being renovated, extended, restored or maintained.

### **Licensing/Regulatory Information**

Not Applicable

### **Pre-Requisites**

#### **Prerequisite units**

|             |                            |
|-------------|----------------------------|
| CPCPCM2023A | Carry out OHS requirements |
|-------------|----------------------------|

## Employability Skills Information

**Employability skills**      This unit contains employability skills.

## Elements and Performance Criteria Pre-Content

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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.

## Elements and Performance Criteria

| ELEMENT                               | PERFORMANCE CRITERIA                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
|---------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1. Prepare for work.                  | <p>1.1. Appliance specifications and servicing and manufacturer manuals are obtained for planned work activity.</p> <p>1.2. <b>Safety (OHS)</b> requirements associated with maintenance of <b>Type A gas appliances</b>, and workplace <b>environmental requirements</b>, are adhered to throughout the work.</p> <p>1.3. <b>Quality assurance</b> requirements for company operations are identified and adhered to.</p> <p>1.4. <b>Tools and equipment</b> are selected consistent with <b>maintaining Type A gas appliances</b>, checked for serviceability, and any faults are reported to supervisor.</p> <p>1.5. Tasks are planned in conjunction with others involved in or affected by the work.</p> <p>1.6. Work area is prepared and <b>materials</b> identified to support the efficient conduct of maintenance of Type A gas appliances.</p> |
| 2. Identify maintenance requirements. | <p>2.1. Appliance is checked to ensure installation complies with standards and manufacturer requirements.</p> <p>2.2. Electrical safety check is carried out in accordance with authorities' procedures and data is recorded in format required by job specification.</p> <p>2.3. Test equipment is used to support visual inspection and to conduct testing in accordance with <b>statutory and regulatory authority</b> requirements.</p>                                                                                                                                                                                                                                                                                                                                                                                                              |
| 3. Conduct maintenance.               | <p>3.1. Maintenance tasks are carried out in accordance with specifications and manufacturer requirements.</p> <p>3.2. Appliances are checked for operation in accordance with specifications, standards and manufacturer recommendations.</p> <p>3.3. Faults and malfunctions are identified and reported in accordance with workplace requirements.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| 4. Clean up.                          | <p>4.1. Work area is cleared and materials disposed of or recycled in accordance with state and territory legislation and workplace procedures.</p> <p>4.2. Tools and equipment are cleaned, checked, maintained and stored in accordance with manufacturer recommendations and workplace procedures.</p> <p>4.3. <b>Information</b> is accessed and documentation</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |

**ELEMENT****PERFORMANCE CRITERIA**

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completed in accordance with workplace requirements.

## **Required Skills and Knowledge**

### **REQUIRED SKILLS AND KNOWLEDGE**

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

#### **Required skills**

Required skills for this unit are:

- communication skills to:
  - access information
  - complete workplace documentation
  - determine requirements
  - enable clear and direct communication, using questioning to identify and confirm requirements, share information, listen and understand
  - follow instructions
  - inform relevant authorities and supervisors of completion of job
  - plan work with others
  - read and interpret:
    - documentation from a variety of sources
    - drawings and specifications
  - record data in writing
  - use language and concepts appropriate to cultural differences
  - use and interpret non-verbal communication, such as hand signals
- identifying and accurately reporting to appropriate personnel any faults in tools, equipment or materials
- numeracy skills to apply measurements and calculations
- organisational skills, including the ability to plan and set out work
- teamwork skills to work with others to action tasks and relate to people from a range of cultural and ethnic backgrounds and with varying physical and mental abilities
- technological skills to:
  - access and understand site-specific instructions in a variety of media
  - use mobile communication technology
- undertaking routine basic maintenance on Type A gas appliances, including gas, mechanical and appliance construction components.

## **REQUIRED SKILLS AND KNOWLEDGE**

### **Required knowledge**

Required knowledge for this unit is:

- documentation and reporting requirements
- electrical safety and requisite precautions
- how to access relevant information, including codes and technical standards
- job safety analysis (JSA) and safe work method statements (SWMS)
- procedures for maintaining and testing Type A gas appliances
- properties of gas, gas safety, combustion principles, pressure and flow rates
- relevant statutory and authority requirements related to maintaining Type A gas appliances
- SI system of measurements
- workplace and equipment safety requirements.

# Evidence Guide

## EVIDENCE GUIDE

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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.

### Overview of assessment

This unit of competency could be assessed in the workplace or a close simulation of the workplace environment providing that simulated or project-based assessment techniques fully replicate plumbing and services workplace conditions, materials, activities, responsibilities and procedures.

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

A person who demonstrates competency in this unit must be able to provide evidence of:

- locating, interpreting and applying relevant information, standards and specifications to determine requirements and maintain Type A gas appliances
- applying safety requirements throughout the work sequence, including the use of personal protective clothing and equipment
- as a minimum the ability to, given the plans and specifications, perform cleaning and routine basic adjustment to two Type A appliances, checking gas supply pressures, effective operation and flue condition, ensuring:
  - correct identification of maintenance procedures and requirements
  - correct selection and use of appropriate processes, tools and equipment
  - completing all work to specification
  - compliance with regulations, standards and organisational quality procedures and processes
  - communicating and working effectively and safely with others.

### Context of and specific resources for assessment

This competency is to be assessed using standard and authorised work practices, safety requirements and environmental constraints.

Assessment of essential underpinning knowledge

## EVIDENCE GUIDE

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will usually be conducted in an off-site context.

Assessment is to comply with relevant regulatory or Australian standards' requirements.

Resource implications for assessment include:

- an induction procedure and requirement
- realistic tasks or simulated tasks covering the minimum task requirements
- relevant specifications and work instructions
- tools and equipment appropriate to applying safe work practices
- support materials appropriate to activity
- workplace instructions relating to safe working practices and addressing hazards and emergencies
- material safety data sheets
- research resources, including industry related systems information.

Reasonable adjustments for people with disabilities must be made to assessment processes where required. This could include access to modified equipment and other physical resources, and the provision of appropriate assessment support.

### Method of assessment

Assessment methods must:

- satisfy the endorsed Assessment Guidelines of the Construction, Plumbing and Services Training Package
- include direct observation of tasks in real or simulated work conditions, with questioning to confirm the ability to consistently identify and correctly interpret the essential underpinning knowledge required for practical application
- reinforce the integration of employability skills with workplace tasks and job roles
- confirm that competency is verified and able to be transferred to other circumstances and environments.

Validity and sufficiency of evidence requires that:

- competency will need to be demonstrated over a period of time reflecting the scope of the role and the practical requirements of the

## EVIDENCE GUIDE

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workplace

- where the assessment is part of a structured learning experience the evidence collected must relate to a number of performances assessed at different points in time and separated by further learning and practice, with a decision on competency only taken at the point when the assessor has complete confidence in the person's demonstrated ability and applied knowledge
- all assessment that is part of a structured learning experience must include a combination of direct, indirect and supplementary evidence.

Assessment processes and techniques should as far as is practical take into account the language, literacy and numeracy capacity of the candidate in relation to the competency being assessed.

Supplementary evidence of competency may be obtained from relevant authenticated documentation from third parties, such as existing supervisors, team leaders or specialist training staff.

## Range Statement

### RANGE STATEMENT

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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.

***Safety (OHS)*** is to be in accordance with commonwealth, state and territory legislation and regulations and may include:

- handling of materials
- hazard control
- personal protective clothing and equipment prescribed under legislation, regulations and workplace policies and practices
- safe operating procedures, including recognising and preventing hazards associated

## RANGE STATEMENT

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|                                                    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
|----------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                                                    | with:                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
|                                                    | <ul style="list-style-type: none"> <li>• hazardous materials and substances</li> <li>• service lines</li> <li>• surrounding structures and facilities</li> <li>• trip hazards</li> <li>• use of tools and equipment</li> <li>• work site visitors and the public</li> <li>• working at heights</li> <li>• working in proximity to others</li> </ul>                                                                                                                                                                                                                            |
| <b>Type A gas appliances:</b>                      | <ul style="list-style-type: none"> <li>• use of firefighting equipment</li> <li>• use of first aid equipment</li> <li>• workplace environment and safety.</li> <li>• are badged appliances of less than 500 megajoules (MJ) for which an Australian Gas Authority (AGA) approval scheme exists</li> <li>• include: <ul style="list-style-type: none"> <li>• decorative heaters</li> <li>• ducted heating systems</li> <li>• gas stoves and hot plates</li> <li>• heated water storage</li> <li>• instant heated water heaters</li> <li>• space heaters.</li> </ul> </li> </ul> |
| <b>Environmental requirements</b> include:         | <ul style="list-style-type: none"> <li>• clean-up protection</li> <li>• waste management.</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| <b>Quality assurance</b> requirements may include: | <ul style="list-style-type: none"> <li>• Australian standards</li> <li>• Environment Protection Authority (EPA)</li> <li>• internal company quality assurance policy and risk management strategy</li> <li>• International Standards Organisation</li> <li>• site safety plan</li> <li>• workplace operations and procedures.</li> </ul>                                                                                                                                                                                                                                       |
| <b>Tools and equipment</b> may include:            | <ul style="list-style-type: none"> <li>• chain blocks</li> <li>• forklifts</li> <li>• hand and power tools</li> <li>• hand trolleys</li> <li>• hoists and jacks</li> <li>• lifting and load shifting equipment</li> <li>• measuring equipment</li> <li>• rollers</li> </ul>                                                                                                                                                                                                                                                                                                    |

## RANGE STATEMENT

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### ***Maintenance of Type A gas appliances:***

- spanners
- test equipment and instruments, including:
  - manometers
  - multi-meters
  - neon testers
  - volt sticks
- wrenches.
- includes cleaning or adjusting gas components, including:
  - burners
  - pilots
  - regulators
  - thermocouples
  - thermostats
  - temperature and pressure relief (TPR) valves
- also includes rectifying simple gas supply problems, including meters and regulators
- is to comply with appropriate Australian standards.

### ***Materials*** for the maintenance of Type A gas appliances:

- may include:
  - piping materials
  - regulators and meters
  - Type A gas appliances
  - other approved materials
- are to comply with appropriate standards for maintaining Type A gas appliances.

### ***Statutory and regulatory authorities*** include:

- state or territory statutory authority
- statutory gasfitting authority
- statutory plumbing authority.

### ***Information*** may include:

- charts and hand drawings
- diagrams, sketches or graphics
- instructions issued by authorised organisational or external personnel
- job drawings
- manufacturer specifications and instructions
- maps
- material safety data sheets (MSDS)
- memos
- organisation work specifications and

## RANGE STATEMENT

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requirements

- regulatory and legislative requirements, particularly those pertaining to:
  - building codes
  - OHS and environmental requirements
  - plumbing and gasfitting authority regulations
- relevant Australian standards
- safe work procedures relating to maintaining Type A gas appliances
- signage
- verbal, written and graphical instructions
- work bulletins
- work schedules, plans and specifications.

## Unit Sector(s)

**Unit sector** Plumbing and services

## Co-requisite units

**Co-requisite units** Nil

## Functional area

**Functional area**