

Unit of Competency CPCPMS3039

Maintain mechanical services equipment

Application

This unit specifies the skills and knowledge required to perform general maintenance of heating, ventilating and air conditioning (HVAC) systems and associated mechanical equipment (air distribution systems, hydronic systems and control systems).

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

In some jurisdictions, this unit of competency may form part of accreditation, licensing, legislative, regulatory or certification requirements.

Prerequisite Unit

CPCPCM2043 Carry out WHS requirements

Elements and Performance Criteria

1. Prepare for work.	<ul style="list-style-type: none">1.1 Access and read job plans and specifications.1.2 Identify and apply workplace policies and procedures, work health and safety (WHS) and environmental requirements.1.3 Apply quality assurance requirements in accordance with workplace requirements.1.4 Plan and sequence tasks in conjunction with others involved in or affected by the work and statutory and regulatory authorities' requirements.1.5 Prepare work area to support efficient maintenance of mechanical services equipment.1.6 Select appropriate tools and equipment including personal protective equipment (PPE) and check for serviceability.1.7 Identify materials and equipment required to complete the task.
2. Identify system requirements.	<ul style="list-style-type: none">2.1 Create a materials list and collect materials2.2 Identify fabrication requirements from job plans, specifications and relevant information.2.3 Calculate quantity and type of materials and components.
3. Repair and replace faulty components and test job.	<ul style="list-style-type: none">3.1 Isolate equipment safely according to regulations and WHS requirements.3.2 Remove faulty items or components using appropriate tools, equipment and procedures.3.3 Select replaceable items from manufacturers' catalogue or serviceable items according to manufacturer or site specifications.3.4 Perform system adjustments to equipment or components to comply with specifications.3.5 Carry out operational checks on system to ensure its compliance with job specification.3.6 Document maintenance report in format required by the maintenance specification
4. Clean up.	<ul style="list-style-type: none">4.1 Clear the work area, and dispose of, reuse or recycle materials in accordance with

	<p>state and territory legislation and workplace policies and procedures.</p> <p>4.2 Clean tools and equipment, check for serviceability reporting any damage, store and secure.</p> <p>4.3 Complete documentation according to workplace requirements.</p>
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Foundation skills

Foundation skills essential to performance are explicit in the performance criteria of this unit of competency.

Unit Mapping Information

Supersedes and is equivalent to CPCPMS3039A Maintain mechanical services equipment.

Links

Companion Volume Implementation Guide:

<https://vetnet.education.gov.au/Pages/TrainingDocs.aspx?q=7e15fa6a-68b8-4097-b099-030a5569b1ad>

Assessment Requirements for CPCPMS3039

Maintain mechanical services equipment

Performance Evidence

To demonstrate competency, a candidate must meet the performance criteria for this unit by:

- maintaining one air distribution systems, including:
 - o replacing, realigning and tensioning pulleys and belts as required
 - o checking the integrity of mounting and check for excessive vibration and noise
 - o checking flexible connections
 - o lubricating bearings
 - o cleaning filters, coils and blades
 - o checking system for leaks
- maintaining one hydronic system, including:
 - o replacing gland valves and O rings where required on system
 - o replacing and adjusting pump glands
 - o checking functionality of and cleaning drain
 - o adjusting operating control valves and settings
 - o replacing chemical dosing systems when required and checking water system for leaks.

Knowledge Evidence

To be competent in this unit, a candidate must demonstrate knowledge of:

- air conditioning and refrigeration principles
- effect of bacteria in water, and potential impact on health
- operating principles of system components used in mechanical services equipment
- mechanical and hydraulic principles
- processes of maintaining mechanical and hydraulic services equipment
- how to access relevant information, including codes and standards
- tools, materials and equipment used to maintain mechanical services equipment
- work health and safety (WHS) requirements to maintain mechanical services equipment.

Assessment Conditions

Assessors must meet the requirements for assessors contained in the Standards for Registered Training Organisations.

This unit must be assessed in the workplace or a close simulation using realistic workplace conditions, materials, activities, responsibilities, procedures, safety requirements and environmental considerations.

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