

Unit of Competency CPCPFS4023

Commission fire system pumpsets

Application

This unit specifies the skills and knowledge required to test and commission a fire system pumpset.

It covers preparation for the work, identification and confirmation of system specifications and requirements, physical testing and commissioning of systems, and finalisation of work processes, including the completion of records and documentation.

The role may involve interaction with architects, builders, suppliers and relevant planning authorities and requires a sound understanding of applicable standards and legislation including work health and safety (WHS).

This unit's requirements may be carried out by experienced tradespersons such as hydraulic design consultants, plumbers or plumbing contractors who employ a team of plumbers.

Site location for work application may be either domestic or residential and may be a new work site or an existing structure.

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

Prerequisite Unit

Nil.

Elements and Performance Criteria

1. Prepare for work.	<ul style="list-style-type: none">1.1 Obtain current approved plans and specifications.1.2 Identify and apply workplace policies and procedures, work health and safety (WHS) and environmental instructions.1.3 Apply quality assurance requirements to comply with internal and external policies, procedures, standards and authorities.1.5 Consult with others to plan and sequence tasks.1.6 Select and check the serviceability of appropriate tools, equipment and personal protective equipment (PPE).1.7 Prepare work area to support effective commissioning process.
2. Identify system requirements.	<ul style="list-style-type: none">2.1 Identify and confirm system design requirements from job specifications according to standards.2.2 Identify testing and commissioning requirements of fire system pumpset according to standards, authorities' requirements and job specifications.
3. Test and commission system.	<ul style="list-style-type: none">3.1 Check fire system pumpset and pump controls to ensure type and installation conform to standards, job specifications, manufacturer recommendations and authorities' requirements.3.2 Test operation of pumpset according to job specifications, manufacturer recommendations and authorities' requirements and adjust as required.3.3 Commission pumpset to ensure correct operation according to standards and manufacturer and job specifications.
4. Clean up work	<ul style="list-style-type: none">4.1 Clear the work area of materials and dispose of, reuse or recycle materials

area.	<p>according to legislation, regulations, environmental codes of practice and job specifications.</p> <p>4.2 Clean tools and equipment, check for damage and malfunction and store according to manufacturer recommendations and workplace procedures.</p> <p>4.3 Access information to complete documentation according to workplace requirements and submit within specified timeframes.</p>
-------	--

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 CPCPFS4023A Commission fire system pumpsets.

Links

Companion Volume Implementation Guide:

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

Assessment Requirements for CPCPFS4023 Commission fire system pumpsets

Performance Evidence

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

- testing and commissioning one fire system pumpset, and
 - o interpreting plans and specifications correctly to complete work to the specified standard within accepted timeframes
 - o complying with appropriate legislation, organisational processes and regulatory requirements

Knowledge Evidence

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

- job safety analysis (JSA) and safe work method statements (SWMS)
- National Fire Protection Association (NFPA) and Factory Mutual performance-based codes of practice
- performance measures for fire system pumpsets
- process to install, test and commission fire system pumpsets
- processes for accessing information and for calculating material requirements
- types of fire system pumpsets including:
 - o centrifugal
 - o close coupled, long coupled with mechanical joints or belt driven by an electric or petrol and diesel motor
 - o multi-stage turbine
 - o positive displacement
 - o submersible and electric and compression ignition driven pumps
- pump controls including:
 - o automatic, including float, level, flow or pressure switches
 - o manual
- properties of water including:
 - o pressure
 - o flow rates
 - o atmospheric pressure
- test systems, equipment and procedures
- SI system of measurements

- work health and safety practices relating to testing and commissioning fire system pumpsets including:
 - handling of materials
 - hazard control
 - personal protective clothing and equipment
 - working with electricity
 - hazardous materials and substances
 - use of first aid equipment
 - workplace environment and safety
- environmental requirements including:
 - water quality management
 - clean-up protection
 - stormwater protection
 - waste management
- sustainability principles and concept including:
 - efficient energy use
 - disposing of waste material to ensure minimal environmental impact
 - selecting appropriate components to ensure minimal environmental impact
- quality assurance requirements including:
 - Environment Protection Authority (EPA)
 - internal company quality assurance policy and risk management strategy and workplace operations and procedures
 - International Standards Organisation (ISO)
- tools and equipment including:
 - hand and power tools
 - test equipment
- planning and site information including:
 - Australian building and plumbing codes specifically performance requirements for fire system pumpsets
 - standards applicable to installing and commissioning fire system pumpsets including AS2941 Fixed fire protection installations - Pumpset systems and AS2118 .1 Automatic fire sprinkler systems
 - charts, hand drawings, plans and sketches
 - instructions issued by authorised organisational or external personnel
 - manufacturer specifications and instructions
 - safety data sheets (SDS)
 - organisation work specifications and requirements
 - WHS and environmental requirements
 - plumbing regulations
 - signage
 - work schedules, plans and specifications

Assessment Conditions

Assessors must satisfy the requirements for assessors listed 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.

Links

Companion Volume Implementation Guide:

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