

# Unit of Competency CPCPFS3046

## Test the integrity of water-based fire protection systems using pressure

### Application

This unit of competency specifies the skills and knowledge required to test the integrity of water-based fire protection systems using pressure.

It includes performing water pressure testing on fire safety sprinkler and hydrant systems to establish the integrity of the water-based system or to identify and rectify leaks.

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. Plan the work.	<ul style="list-style-type: none"><li>1.1 Obtain, read and apply water-based fire protection systems requirements from relevant job plans and specifications, codes, Australian Standards, manufacturer's specifications and jurisdictional requirements.</li><li>1.2 Identify and apply workplace policies and procedures, work health and safety (WHS) and environmental requirements.</li><li>1.4 Identify materials and components and calculate quantities.</li></ul>
2. Prepare for work.	<ul style="list-style-type: none"><li>2.1 Check material and components for conformity and action any discrepancies.</li><li>2.2 Select and check serviceability of tools, equipment and personal protective equipment (PPE) and rectify or report any faults.</li><li>2.3 Prepare work area to efficiently test fire protection system.</li><li>2.4 Determine the type of test to be performed and prepare appropriate testing equipment.</li></ul>
3. Test fire protection systems.	<ul style="list-style-type: none"><li>3.1 Connect air test equipment to system using pressure test not exceeding 50KPa.</li><li>3.2 Connect water test equipment and conduct hydrostatic test according to relevant codes and Australian Standard.</li><li>3.3 Record readings from each pressure gauge in format determined by job specifications and quality assurance requirements.</li><li>3.4 isolate water supply and open all water outlets to drain down system.</li><li>3.5 Recharge and restore system to operational condition.</li><li>3.6 Complete documentation and submit within required timeframe.</li></ul>
4. Clean up.	<ul style="list-style-type: none"><li>4.1 Clear the work area, and dispose of, reuse or recycle materials in accordance with state and territory legislation and workplace policies and procedures.</li><li>4.2 Clean tools and equipment, check for serviceability and report any damage, and store and secure.</li></ul>

## 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 CPCPFS3046A Test the integrity of water-based fire protection systems using pressure.

## Links

Companion Volume Implementation Guide:

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

# Assessment Requirements for CPCPFS3046

## Test the integrity of water-based fire protection systems using pressure

### Performance Evidence

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

- testing the integrity of water-based fire protection systems:
  - o one water pressure test on a fire sprinkler system
  - o one water pressure test on a fire hydrant system.

Note: Tests may be conducted during installation or maintenance of jobs.

### Knowledge Evidence

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

- legislation, regulations, standards and codes relating to pressure testing water-based fire protection systems:
- policies, procedures and environmental requirements and sustainability principles relating to pressure testing water-based fire protection systems
- functional and operational features of tools and equipment used in pressure testing water-based fire protection systems
- safety requirements when using compressed air
- processes, procedures and techniques of:
  - o testing water-based fire protection systems
- characteristics, application and limitations of approved materials and components:
  - o sprinkler heads
  - o roll groove and threaded joints
  - o steel pipe
  - o chlorinated polyvinyl chloride (CPVC) pipe
  - o non-ferrous pipe
  - o alarm valves
  - o ball valves
  - o gate valves
  - o butterfly valves
  - o waste and test valves

- o flexible droppers
  - o fire hydrant valves
  - o booster and suction arrangements
  - o check valves
- materials storage and environmentally responsible waste disposal relating to pressure testing water-based fire protection systems
- how to access relevant information including, job plans and specifications, codes, Australian Standards, manufacturer's specifications and jurisdictional requirements.
- tools, materials and equipment used for testing the integrity of water-based fire protection systems
- work health and safety (WHS) requirements for testing the integrity of water-based fire protection systems.

## 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>