

Unit of Competency

CPPFES2037 Inspect and test fire hydrant systems

Modification history

Release	Comments
1	Supersedes and is equivalent to CPPFES2037A Inspect and test fire hydrant systems. Unit updated to meet the Standards for Training Packages 2012. This version first released with CPP Property Services Training Package Release 13.0.

Application

This unit of competency specifies the skills and knowledge required to complete six-monthly and yearly inspection and testing procedures to verify that hydrant systems function as intended. It includes working safely while conducting compliance tests, visual inspection, identifying non-compliance defects, fulfilling mandatory reporting requirements, and isolating and resetting hydrant systems. Service activities are conducted in compliance with requirements of the relevant Australian Standards and National Construction Code (NCC).

The unit does not cover water supply proving tests on hydrant systems, or inspection and testing functions associated with pressure-reducing equipment in high rise buildings, fire pumpset systems or water supply tanks.

The unit is suitable for those with basic skills and knowledge undertaking routine work tasks under the direction of more experienced workers.

Licensing, legislative, regulatory or certification requirements apply to this unit of competency in some states and territories. For further information, check with the relevant regulatory authority.

Unit Sector

Fire Protection Inspection and Testing

Elements and Performance Criteria

1. Plan and prepare for service operation.	<ul style="list-style-type: none">1.1 Read work instructions to clarify service timeframes, client needs, and site and fire hydrant system locations.1.2 Discuss planned service procedures with relevant persons to clarify client needs and expectations.1.3 Plan work activities to comply with relevant Australian Standards, NCC, regulatory, work health and safety (WHS) and workplace requirements.1.4 Identify potential and actual breaches of rules and regulations associated with work instructions and take required action to ensure compliance according to regulatory and workplace requirements.1.5 Select and use required tools and equipment, including personal protective equipment (PPE).1.6 Arrange access to worksite and communicate with responsible entity and affected persons to advise duration and impact of planned service procedures and to ensure alternative safety arrangements are implemented.
--	--

	1.7 Identify and prepare to control hazards in the work area according to workplace requirements.
2. Inspect fire hydrant system.	<p>2.1 Inspect fire hydrant system following the six-monthly and yearly maintenance schedules specified in the relevant Australian Standard.</p> <p>2.2 Identify defects, non-compliances and potential and actual impediments to performance of the fire hydrant system according to regulatory and workplace requirements.</p> <p>2.3 Record inspection results according to regulatory and workplace requirements.</p>
3. Test fire hydrant system.	<p>3.1 Identify and isolate pumpset and other system interfaces to enable testing procedures to regulatory and workplace requirements.</p> <p>3.2 Complete six-monthly and yearly testing procedures to verify system functions following the maintenance schedules specified in the relevant Australian Standard.</p> <p>3.3 Record test results according to regulatory and workplace requirements.</p>
4. Finalise service operation.	<p>4.1 Reinstate fire hydrant system to full operational condition according to workplace requirements.</p> <p>4.2 Complete service documentation and report outstanding defects, non-compliances and potential or actual impediments to system performance according to Australian Standards, regulatory and workplace requirements.</p> <p>4.3 Check tools and equipment for faults, wear or damage and rectify or report problems according to workplace requirements.</p> <p>4.4 Leave client premises in a clean and tidy condition.</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 CPPFES2037A Inspect and test fire hydrant systems.

Links

Companion Volume Implementation Guide:

<https://vetnet.education.gov.au/Pages/TrainingDocs.aspx?q=6f3f9672-30e8-4835-b348-205dfcf13d9b>

Assessment Requirements for CPPFES2037 Inspect and test fire hydrant systems

Modification history

Release	Comments
1	Supersedes and is equivalent to CPPFES2037A Inspect and test fire hydrant systems. Unit updated to meet the Standards for Training Packages 2012. This version first released with CPP Property Services Training Package Release 13.0.

Performance Evidence

To demonstrate competency, a candidate must meet the elements and performance criteria of this unit by completing the six-monthly and yearly inspection and test procedures on 15 fire hydrant systems installed across ten different sites according to the requirements of the current Australian Standard for the routine service of fire protection systems and equipment, excluding:

- inspection and testing functions associated with pressure-reducing equipment in high rise buildings, fire pumpset systems or water supply tanks
- water supply proving tests.

Knowledge Evidence

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

- action to take when a breach of regulation, work health and safety (WHS) or other policy occurs when inspecting and testing fire hydrant systems
- basic principles of hydraulics, such as pressure scales (metric and imperial)
- flow switches and associated testing equipment
- general operation of hydrant system components:
 - backflow prevention devices
 - booster valve arrangements
 - control valves
 - interface connections to fire indicating panel and/or warning systems by pressure and flow switches
 - landing valves
 - pumpset and interface controls
 - towns' main reticulated water supplies
 - valve anti-tamper controls
 - water pressure and flow through a system to activate pumpsets
 - water tank water supply infill and outlet valve arrangement
- hydrant systems and components:
 - circulation and system pressure relief valves
 - controls on pumpset controller panel:
 - fuel gauges
 - indicators
 - main isolating switch
 - equipment that can be fitted to a landing valve:
 - delivery layflat hoses

- types of couplings
- o flow switches and associated testing equipment
- o isolating valves associated with hydrant system
- o main water supply underground key-operated valve location
- o pressure gauges
- o pumpsets associated with hydrant system
- o pump starting switches
- o system block plan
- o system main alarm bell and/or alarm strobe
- o water-based fire-suppression system control and alarm valves and ancillary equipment for control and alarm operation indication/interface
- o water supply tanks, water level indicators and automatic inflow valves
- implications of not complying with regulatory requirements when inspecting and testing fire hydrant systems
- isolating valves associated with hydrant system
- key features of legislation, regulations, codes and Australian Standards relevant to the inspection and testing of fire hydrant systems:
 - o environmental protection
 - o hydrant system applications:
 - combined sprinkler and hydrant system
 - town main system hydrant points
 - o maintenance schedules
 - o National Construction Code (NCC) and deemed-to-satisfy requirements
 - o records and documentation
- terminology used in relation to water-based fire-suppression systems:
 - o aggressive environments
 - o control assembly and pump area
 - o critical defect
 - o frequency and tolerances of maintenance intervals
 - o installation and system pressure
 - o pressure-reducing valve
 - o preventive maintenance
 - o pump controller status
 - o sprinkler system interface controls
 - o stop cocks and main stop valves
 - o system pressure gauge schedule
 - o water supply proving tests
 - o water supply stop valves
 - o water supply tanks: atmospheric and pressure
- types and purpose of tools and equipment used when inspecting and testing fire hydrant systems
- workplace requirements for inspecting and testing fire hydrant systems:
 - o maintenance of tools and equipment
 - o WHS, including hazard and risk identification and control.

Assessment Conditions

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

Assessment must be conducted in the workplace or a simulated workplace using realistic conditions, materials, activities, responsibilities, procedures, safety requirements and environmental considerations.

Candidates must have access to documentation, tools, equipment, pictures or cut-away sections of control assemblies and valves to show operation, adequate water supply and draining or recycling arrangements to operate fire hydrant systems and operational fire hydrant systems required to achieve the performance evidence.

Links

Companion Volume Implementation Guide:

<https://vetnet.education.gov.au/Pages/TrainingDocs.aspx?q=6f3f9672-30e8-4835-b348-205dfcf13d9b>