



Australian Government

Assessment Requirements for CPCPFS3041 Inspect and test fire pumpsets

Release: 2

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Modification History

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| Release 2 | This version first released with CPC Construction, Plumbing and Services Training Package Release 5.1.

Changes to Elements and Performance Criteria 2.1, 2.3 and 3.8.
Performance Evidence is formatted for clarity. |
| Release 1 | This version first released with CPC Construction, Plumbing and Services Training Package Release 5.0.

Supersedes and is equivalent to CPCPFS3041A Inspect and test fire pumpsets. Updated to meet the Standards for Training Packages 2012. |

Performance Evidence

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

- conducting four routine services on a fire pumpset, including:
 - three scheduled monthly, and
 - one scheduled six-monthly activities

and include:

- compression ignition pumpsets used as a booster pumpset on a sprinkler/hydrant system
- an electrical pumpset used as a:
 - booster pumpset on a sprinkler/hydrant system fed from a town mains supply or a static water supply
- conducting all routine service in compliance with current Australian standards, regulations, codes and organisational requirements
- completing work according to customer and organisational expectations within accepted timeframes.
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Knowledge Evidence

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

- application of fire pumpsets as defined in AS 2941 Fixed fire protection installations – Pumpset systems and AS 2118 Automatic fire sprinkler systems
- terminology used in relation to pumpsets
- basic principles of hydraulics:

- basic head or pressure calculation for height per metre
- metric and imperial pressure scales
- basic principles of operation and purpose of components:
 - accumulators
 - batteries
 - circulation and system pressure relief valves
 - compression ignition pumpset drivers
 - electrical pumpset drivers
 - engine starting and control or monitor batteries
 - header tanks
 - impellers
 - isolating valves associated with pumpsets
 - jacking or jockey pumps
 - multi-stage pumps
 - pressure gauges
 - pump controllers and ancillary equipment for control and indications
 - pump drivers
 - pump glands and seals
 - pump performance curves
 - pump starting devices
 - pumpset couplings
 - safety guards
 - system pressure gauge schedules
- water supply tanks:
 - atmospheric
 - suction with priming tanks
- general operation of pumpsets:
 - cooling systems
 - design speed requirements
 - exhaust systems
 - fuel systems
 - full load operation
 - normal running operation
 - pre-start and post-start checks
 - pumpset controllers
 - starting and stopping methods
 - suction and discharge connections and pressure readings
- pumpset types which may include those used in fire protection systems that comply with Australian standards such as:
 - AS 1851 Routine service of fire protection systems and equipment

- AS 2118 Automatic fire sprinkler systems
- AS 2419 Fire hydrant installations
- AS 2941 Fixed fire protection installations - Pumpset systems
- AS CA16-1962 Automatic sprinkler installations
- NFPA 20 Standard for the installation of stationary fire pumps for fire protection (US)
- system interfaces:
 - flow switches
 - pressure switches
 - tamper switches
 - valve positioning switches
 - control and indicating equipment (CIE)
- devices that operate signals between pumpset and other services such as building monitoring services
- other life safety systems:
 - warning systems
 - fire indicator panel (FIP)
 - security monitoring services
- legislative and industry requirements:
 - dangerous goods regulations
 - licensing arrangements
 - environmental regulations
 - work health and safety (WHS) legislation, regulations and codes associated with fire pump rooms such as: working in isolation, lighting, fumes, trip hazards
 - relevant Commonwealth and state or territory building acts, regulations and codes, such as National Construction Code (NCC)
 - AS 1851 Routine service of fire protection systems and equipment
- organisational requirements:
 - client-specific contractual requirements
 - documentation and information systems and processes
 - legal and organisational policies and guidelines, including personnel practices and guidelines outlining work roles, responsibilities and delegations
 - use of electronic job scheduling and communication devices
- documentation to review and verify that installed systems comply with legislative and industry requirements such as:
 - building's essential services or fire safety measures listing
 - relevant commonwealth and state or territory building acts, regulations and codes
 - relevant Australian standards listed on essential service listing
 - environmental regulations
- methods of applying sustainability principles and concepts
- testing procedures and activities that comply with requirements of AS 1851 Routine service of fire protection systems and equipment to verify the following pump functions:

- pump starts at correct pressure
- pump supplies correct kPa at no flow condition requirements
- routine service frequency schedules:
 - reference to AS 1851 Routine service of fire protection systems and equipment schedules of work conducted at regular frequencies that relate to the work scope for monthly and six-monthly routine service schedules
- how to access relevant information, including codes and standards
- tools, materials and equipment used for inspecting and testing test fire pumpsets
- WHS requirements for inspecting and testing test fire pumpsets.

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 volumes to this training package are available at the VETNet website - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=7e15fa6a-68b8-4097-b099-030a5569b1ad>