

CPPSPS4012 Design, install and service automated systems for swimming pools and spas

Application

This unit specifies the skills and knowledge required to design, install, program, test and service automated systems in swimming pools and spas.

This unit is suitable for swimming pool and spa technicians who work independently using specialised knowledge and skills to solve predictable and unpredictable problems in swimming pool and spa automated systems in accordance with regulatory requirements in:

- private swimming pools and spas
- public swimming pools and spas, including:
 - hydrotherapy and therapeutic exercise pools
 - wading and receiving pools associated with water slides
 - wave pools.

All work must be carried out to comply with workplace procedures, in accordance with state/territory work health and safety (WHS), regulations and legislation that applies to the workplace. Legislative and regulatory requirements apply to swimming pool and spa technicians but vary according to state/territory jurisdictions. Users must check with the relevant regulatory authority before delivery.

Service technicians are not permitted to undertake any installation, replacement, maintenance and repair functions that are restricted to licensed trades or occupations.

Prerequisite Unit

Nil.

Elements and Performance Criteria

1. Assess job requirements.	1.1	Identify relevant Australian standards and regulatory, manufacturer and enterprise requirements related to automated swimming pool and spa systems.
	1.2	Review work instructions and confirm installation, service and/or repair activities required.
	1.3	Identify hazards and assess and control risks in the work area in line with WHS and enterprise requirements.
2. Install and test automated systems and components for swimming pools or spas.	2.1	Apply relevant regulations, Australian standards and manufacturer, client and enterprise requirements throughout swimming pool or spa circulation automated system or component design and installation.
	2.2	Coordinate installation work with relevant licensed personnel.
	2.3	Fit and program automated system.
	2.4	Test and validate automated system or component.

3. Maintain automated systems for swimming pools or spas.	3.1 Identify service and maintenance requirements from manufacturer instructions in line with enterprise requirements. 3.2 Check and fit replacement components in line with manufacturer instructions. 3.3 Service automated system in line with WHS, manufacturer instructions and enterprise procedures.
4. Resolve faults in automated systems for swimming pools or spas.	4.1 Apply system knowledge and technical resources to analyse faults and defects efficiently and accurately. 4.2 Diagnose faults that are not covered fully by maintenance manual fault diagnosis guides. 4.3 Seek advice and repair work assistance from relevant personnel for activities outside scope of own expertise or licensing. 4.4 Apply WHS and sustainability practices related to materials, equipment, and the surrounding environment during fault finding and repair or replacement activities. 4.5 Repair or replace components in line with manufacturer instructions, and regulatory, client and enterprise requirements. 4.6 Test and commission automated system in line with manufacturer instructions.
5. Complete installation, repair and service.	5.1 Install or reinstate work area and automated system to operational condition. 5.2 Document and report procedures undertaken, and system and/or component malfunctions, faults, wear or damage identified. 5.3 Advise client of operational and maintenance requirements of the automated system in line with enterprise requirements. 5.4 Advise appropriate persons of non-compliance of swimming pool or spa and environs with safety and regulations.

Foundation Skills

Candidates require:

- reading skills to source and interpret technical information, regulations, standards and codes of practice
- oral communication skills to interact with clients from diverse social, economic and cultural backgrounds
- numeracy skills to perform calculations related to troubleshooting faults.

Unit Mapping Information

Supersedes and equivalent to CPPSPS4012A Design, install and service automated systems for swimming pools and spas.

Links

Companion Volume Implementation Guide:

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

Assessment Requirements for CPPSPS4012

Design, install and service automated systems for swimming pools and spas

Performance Evidence

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

- designing, installing and testing a swimming pool and spa automated system and components in a minimum of two swimming pools and one spa
- Applying technical knowledge and advanced diagnostic skills to identify and repair two faults with automated systems, in line with regulatory requirements.

Knowledge Evidence

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

- key requirements of relevant commonwealth, state or territory, and local government regulations and Australian standards related to swimming pool and spa servicing:
 - work health and safety
 - public health
 - dangerous goods
 - environment and waste disposal
 - Australian Competition and Consumer Commission product safety guidelines
 - electrical and plumbing regulations related to own work
- enterprise policies and procedures related to:
 - compliance with regulations
 - maintenance of knowledge of regulations
 - roles, responsibilities and limitations of own role
- work instructions:
 - site requirements, including access
 - personal protective clothing and equipment requirements
 - equipment and systems location information
 - system information
 - warranties and guarantees
- hazards and risks associated with automated systems for swimming pools and spas:
 - explosions and implosions
 - skimmer and suction entrapment
 - electrocution, fire, poisoning
- automated systems:
 - purpose and operating principles
 - maintenance procedures, scheduling and run times
 - types:
 - dosing
 - heating

- lighting
 - pool and spa controllers
 - pool cleaning
 - valving
 - water treatment
- common faults
- components:
 - electronics:
 - circuits
 - diagrams
 - safety
 - testing and test equipment
 - peristaltic pumps
 - programmable controllers
 - sensors
 - connectivity
 - functions of actuator valves.

Assessment Conditions

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

Assessment must be undertaken in the workplace or in a simulated workplace environment.

Candidates must be provided with:

- relevant manufacturer instructions, regulations, codes, standards and enterprise policies and procedures
- relevant tools and equipment, personal protection equipment (PPE)
- technical references with current information on automated swimming pool and spa systems:
 - operating principles
 - components
 - faults and troubleshooting.

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