



Australian Government

AURPTA110 Inspect and service pumping systems

Release: 1

AURPTA110 Inspect and service pumping systems

Modification History

Release	Comments
Release 1	This version first released with AUR Automotive Retail, Service and Repair Training Package Version 6.0

Application

This unit describes the skills and knowledge required to inspect and service pumping systems according to manufacturer instructions. The unit involves preparing for the task, inspecting the system, reporting the inspection findings, servicing and adjusting the system, and completing workplace processes and documentation.

The unit applies to those working in the outdoor power equipment service and repair industry. The pumping systems include centrifugal pumps used for firefighting, irrigation and water transfer, high pressure piston pumps used for pressure cleaners, or diaphragm pumps used in orchard spraying.

No licensing, legislative, regulatory or certification requirements apply to this unit at the time of publication.

Unit Sector

Outdoor Power Equipment Technical

Elements and Performance Criteria

ELEMENTS	PERFORMANCE CRITERIA
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Prepare to inspect and service pumping system of outdoor power equipment	1.1 Identify job requirements from workplace instructions 1.2 Source and interpret workplace inspection and service procedures 1.3 Identify and manage hazards associated with the tasks 1.4 Select tools and equipment and check for serviceability
2. Inspect pumping system	2.1 Inspect and test system according to manufacturer specifications, workplace procedures, and safety requirements 2.2 Identify faults and determine causes of faults 2.3 Report inspection findings and test results according to

ELEMENTS	PERFORMANCE CRITERIA
	workplace procedures, and include recommendations for necessary service, repair or adjustment 2.4 Obtain authorisation to proceed according to workplace procedures
3. Service pumping system	3.1 Select service options according to manufacturer maintenance schedule and lubrication charts 3.2 Carry out service and adjustments according to manufacturer specifications, workplace procedures, and safety and environmental requirements without causing damage to components or systems 3.3 Carry out post-service testing according to workplace procedures
4. Complete work processes	4.1 Conduct final inspection according to workplace procedures and confirm equipment is ready for use 4.2 Clear work area and dispose of or recycle materials according to workplace procedures 4.3 Complete documentation according to workplace procedures

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential to performance and are not explicit in the performance criteria.

SKILL	DESCRIPTION
Learning	Locates required sources of information efficiently.
Numeracy	- Interprets pressure and flow volumes and uses basic mathematical operations, including addition, subtraction, multiplication and division - Calculates deviations and tolerances from manufacturer specifications.
Oral communication	Clarifies instructions.
Reading	Interprets information from manufacturer and workshop literature when seeking service specifications and procedures relating to outdoor power equipment pumping systems.
Problem solving	Refers problems outside area of responsibility to required personnel.
Technology	Uses test equipment.

Unit Mapping Information

Supersedes and is equivalent to AURPTA010 Inspect and service pumping systems.

Links

Companion Volume Implementation Guide is found on VETNet -

<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=b4278d82-d487-4070-a8c4-78045ec695b1>

Assessment Requirements for AURPTA110 Inspect and service pumping systems

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Performance Evidence

The candidate must demonstrate the ability to complete the tasks outlined in the elements, performance criteria and foundation skills of this unit, including evidence of the ability to:

- inspect and service the following three outdoor power equipment pumping systems:
 - centrifugal pumping system
 - high pressure piston pumping system
 - diaphragm pumping system.

Knowledge Evidence

The candidate must be able to demonstrate knowledge to complete the tasks outlined in the elements, performance criteria and foundation skills of this unit, including knowledge of:

- methods to locate and interpret information required to inspect and service pumping systems, including:
 - information provided by customer and supervisors
 - manufacturer specifications and procedures or equivalent documentation
- workplace procedures required to inspect and service pumping systems, including:
 - establishing serviceability of tools and equipment
 - documentation procedures
 - housekeeping procedures, including:
 - examination of tools and equipment
 - storage of equipment
 - identification, tagging and isolation of faulty equipment
 - disposal of excess materials
 - recycling procedures
- work health and safety (WHS) requirements relating to inspecting and servicing pumping systems, including procedures for:
 - safely starting and operating pumping systems

- working with exhaust fume hazards
- working with 240 volt equipment
- identification and function of positive and non-positive displacement pumping systems
- application and purpose of pumping systems, including:
 - centrifugal pumps as used for firefighting, irrigation and water transfer
 - high pressure piston pumps as used in pressure cleaners
 - diaphragm pumps as used in orchard spraying
 - drive systems
- types of lubricants and fluids, and their application
- inspection procedures for pumping systems, including:
 - component wear analysis
 - system operation analysis
- service and adjustment procedures for pumping systems, including:
 - filters, strainers and seals
 - hose and pipe fittings and attachments
 - overload devices
 - protective guards and cowlings
 - handle assembly
 - lubrication systems
 - mounting brackets and frame
 - test procedures and pump pressure, suction and discharge
 - drive systems
 - replacing service items
 - inspecting hoses fittings and mountings
- post-service testing and re-testing procedures for outdoor power equipment pumping systems.

Assessment Conditions

Competency is to be assessed in the workplace or a simulated environment that accurately reflects performance in a real workplace setting.

Assessment must include direct observation of tasks.

Where assessment of competency includes third-party evidence, individuals must provide evidence that links them to the pumping systems that they have worked on, e.g. repair orders.

Assessors must verify performance evidence through questioning on skills and knowledge to ensure correct interpretation and application.

The following resources must be made available:

- outdoor power equipment repair workplace or simulated workplace
- workplace instructions
- manufacturer specifications for pumping systems

- three pumping systems specified in the performance evidence and requiring servicing
- tools, equipment and materials appropriate for inspecting and servicing pumping systems.

Assessors of this unit must satisfy the requirements for assessors in applicable vocational education and training legislation, frameworks and/or standards.

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