



Australian Government

AURPTE102 Inspect and service outdoor power equipment engines

Release: 1

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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 engines according to manufacturer instructions. The unit involves preparing for the task, inspecting the engine, reporting the inspection findings, servicing and adjusting the engine, and completing workplace processes and documentation.

The unit applies to those working in the outdoor power equipment service and repair industry. This unit does not apply to light and heavy vehicle engines. The engines include those of two-stroke and four-stroke spark ignition, or four-stroke compression ignition engines of outdoor power equipment.

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

Unit Sector

Outdoor Power Equipment Technical - Engines

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 an outdoor power equipment engine	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 engine	2.1 Inspect and test system according to manufacturer specifications, workplace procedures, and safety requirements

ELEMENTS	PERFORMANCE CRITERIA
	2.2 Identify faults and determine causes of faults 2.3 Report inspection findings and test results according to workplace procedures, and include recommendations for necessary service, repair or adjustment 2.4 Obtain authorisation to proceed according to workplace procedures
3. Service engine	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	- Calculates liquid volumes and service schedule intervals using basic mathematical operations, including addition and subtraction - Interprets measuring equipment divisions.
Oral communication	Clarifies instructions.
Reading	Interprets information from manufacturer and workshop literature when seeking engine service specifications and procedures for outdoor power equipment.
Problem solving	Refers problems outside area of responsibility to required persons.

Unit Mapping Information

Supersedes and is equivalent to AURPTE002 Inspect and service outdoor power equipment engines.

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 AURPTE102 Inspect and service outdoor power equipment engines

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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 outdoor power equipment engine types:
 - two-stroke spark ignition engine
 - four-stroke spark ignition engine
 - four-stroke compression ignition engine
- the above work must involve:
 - minor engine adjustments
 - replacing oil and oil filter
 - inspecting ancillary components.

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 outdoor power equipment engines, including:
 - information provided by customer and supervisors
 - manufacturer specifications and procedures or equivalent documentation
- workplace procedures required to inspect and service outdoor power equipment engines, 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 outdoor power equipment engines, including procedures for working with:
 - rotating and hot components
 - engine oils
 - high energy ignition and charging systems
- environmental requirements, including procedures for trapping, storing and disposing of lubricant and fluids released from outdoor power equipment engines
- identification and function of two-stroke and four-stroke major engine components, including:
 - cylinder block and head
 - piston and connecting rod
 - crankshaft
 - valve train
 - manifolds
 - ports and reed valves
 - carburettors and fuel injectors
- identification and function of outdoor power equipment engine systems, including:
 - lubrication
 - cooling system, including:
 - air cooled
 - liquid cooled
 - fuel system
- basic operation of spark ignition engines and compression ignition engines, including:
 - two-stroke spark ignition engines
 - four-stroke spark ignition engines
 - four-stroke compression ignition engines
- types and applications of:
 - engine configurations
 - engine oils and filters
- inspection procedures for engines, including:
 - oil and fluid leaks
 - ancillary components, including:
 - mountings
 - belts and pulleys
- service and adjustment procedures for engines, including:
 - minor adjustments
 - changing oil and filter

- post-service testing and re-testing procedures for outdoor power equipment engines, including operating engine through full operating range.

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 equipment or outdoor power equipment engines 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 engine specifications
- three different outdoor power equipment engines specified in the performance evidence and requiring servicing
- tools, equipment and materials appropriate for inspecting and servicing outdoor power equipment engines.

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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