



Australian Government

Assessment Requirements for AURPTE104 Overhaul 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

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:

- overhaul at least two different outdoor power equipment engines, including:
 - at least one four-stroke spark ignition engine
 - at least one of the following:
 - two-stroke spark ignition engine
 - four-stroke compression ignition engine.

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 overhaul outdoor power equipment engines, including:
 - information provided by customer and supervisors
 - manufacturer specifications and procedures or equivalent documentation
- workplace procedures required to overhaul 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 overhauling engines and associated engine components, including procedures for:

- operating specialised engine overhaul tools, equipment and machinery
- using cleaning chemicals and toxic substances
- environmental requirements, including procedures for trapping, storing and disposing of lubricants and fluids released from engines
- types, characteristics and operating principles of outdoor power equipment engines and associated engine components
- outdoor power equipment engine overhaul procedures, including:
 - methods for cleaning and preparing an engine for overhaul
 - engine dismantling procedures
 - engine component inspection, measuring and evaluation procedures, including methods for measuring and calculating tolerances and clearances
- engine and engine component repair and adjustment procedures, including:
 - engine cylinder head and cylinder block
 - engine crankshaft and camshaft
 - engine cylinder and engine sleeve fitting, boring and honing
- engine bearing tunnel and connecting rod repair
- engine assembly and adjustment procedures for achieving component tolerances, including:
 - piston to connecting rod big-end alignment
 - big-end bearing to crankshaft journal clearance
 - big-end bearing crush with bearing blue
 - piston ring end gap, back clearance and side clearance
 - main bearing to crankshaft journal clearance
 - cylinder head, valves, guides and seats
 - camshafts and cam followers
 - camshaft end float
 - crankshaft end float
 - gear backlash
 - governors
 - oil pump sealing and pick-up oil piping
- component assembly procedures and processes, including:
 - welch plugs and oil gallery plugs
 - piston and connecting rod assemblies
 - big-end bearings
 - piston rings to pistons
 - main bearings and thrust washers
 - crankshafts, including protection measures for crankshaft journals, bearings, rings and bores
 - finished camshaft bearings
 - cylinder head and components
 - camshafts and cam followers

- timing gears
- oil pumps, oil squirters, oil splashers, and oil pump pick-ups
- governors
- balance shafts
- fitting ancillary components, including covers and cowlings, seals, housings, crankshaft pulleys and flywheels
- post-overhaul testing procedures for engines, including:
 - fuel system adjustments
 - governor speed adjustments
 - engine protection devices.

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 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 outdoor power equipment engine specifications
- two different outdoor power equipment engines requiring overhaul
- tools, equipment and materials appropriate for overhauling and adjusting 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.

Links

Companion Volume Implementation Guide is found on VETNet -

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