



Australian Government

Assessment Requirements for AURPTE004 Overhaul outdoor power equipment engines

Release: 1

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Modification History

Release	Comment
Release 1	New unit of competency.

Performance Evidence

Before competency can be determined, individuals must demonstrate they can perform the following according to the standard defined in this unit's elements, performance criteria, range of conditions and foundation skills:

- overhaul two different outdoor power equipment engines as follows:
 - one four-stroke spark ignition engine
 - one of the following:
 - two-stroke spark ignition engine
 - four-stroke compression ignition engine.

Knowledge Evidence

Individuals must be able to demonstrate knowledge of:

- work health and safety (WHS) and occupational health and safety (OHS) 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:
 - welsh 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

Assessors must satisfy NVR/AQTF assessor requirements.

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:

- automotive 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.

Links

Companion Volume implementation guides are found in VETNet -

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

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