



Australian Government

Assessment Requirements for AURTTE008 Dismantle and assemble multi-cylinder four-stroke petrol 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 standards defined in this unit's elements, performance criteria, range of conditions and foundation skills:

- dismantle and assemble at least two different multi-cylinder four-stroke petrol engines.

Knowledge Evidence

Individuals must be able to demonstrate knowledge of:

- key aspects of work health and safety (WHS), occupational health and safety (OHS) and environmental requirements, including:
 - use of safety glasses, ear protection and safety footwear
 - use of engine dismantling and re-assembly equipment
 - collection and disposal of used engine lubricants and coolant
- types of engines and engine operating principles for:
 - four and two-stroke engines
 - single and multi-cylinder configuration, including straight, vee and horizontally-opposed engine configurations
- construction and operating principles of multi-cylinder four-stroke engine and functions of their major components
- functions of the lubricating system
- components of the lubricating system and their function, including:
 - sump
 - oil pumps
 - oil filters
 - oil galleries
- functions of the cooling system
- components of the cooling system and their function, including:
 - engine cooling galleries

- radiators and hoses
- thermostats
- types and applications of:
 - seals
 - gaskets
 - bearings
- dismantling procedures for engines, including:
 - bolt loosening sequences
 - procedures for noting component positions and order
- measurement and calculation methods for:
 - piston to bore and connecting rod bearing clearance
 - swept volume
 - clearance volume
 - compression ratio and engine capacity
- reassembly procedures for engines, including:
 - bolt tightening sequences and torque requirements
 - piston ring compression procedures
 - procedures for fitting pistons in bores in pairs
- work area clean-up and maintenance requirements.

Assessment Conditions

Assessors must satisfy SNR/AQTF assessor requirements.

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

Where assessment of competency includes third-party evidence, individuals must provide evidence that links them to the engines they have dismantled and re-assembled, 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
- personal protective equipment appropriate to the workplace
- two different multi-cylinder four-stroke petrol engines
- tools and measuring instruments, including lifting equipment.

Links

Companion Volume implementation guides are found in VETNet -

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

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