



**Australian Government**

# **Assessment Requirements for AURTTE009 Remove and replace engine cylinder heads**

**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:

- correctly remove and replace at least two different cylinder heads.

## 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 cylinder head removal and replacement 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
  - petrol and diesel classification
- construction, function and operating principles of major engine components
- component lubricating systems, including:
  - principles and function
  - splash and pressure systems, including system components
- engine cooling systems, including:
  - principles and function
  - air-cooled and water-cooled systems, including system components
- types and application of:
  - seals
  - gaskets

- bearings
- measurement and calculation methods for:
  - swept volume
  - clearance volume
  - compression ratio and engine capacity
- engine cylinder head removal procedures
- engine cylinder head dismantling procedures
- engine cylinder head inspection procedures, including testing for warping
- engine cylinder reassembly procedures
- engine cylinder head replacement procedures, including methods for torquing cylinder head to engine
- 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 having removed and replaced engine cylinder heads, 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 vehicle or stand-mounted operable engines
- tools and measuring instruments
- cylinder head lifting equipment and attachments.

## 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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