



Australian Government

Assessment Requirements for AURTTM012 Carry out camshaft grinding

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:

- grind one camshaft of an in-line engine with at least four cylinders.

Knowledge Evidence

Individuals must be able to demonstrate knowledge of:

- work health and safety (WHS) and occupational health and safety (OHS) requirements, including:
 - procedures for selecting and using personal protective equipment (PPE) for:
 - handling camshafts
 - using chemical cleaning agents
 - operational risk assessment and treatments associated with:
 - electrical safety of grinding machinery
 - grinding machinery movement and operation
- environmental requirements, including procedures for trapping, storing and disposing of cleaning and lubricating fluids released during the grinding process
- types, characteristics and limitations of camshaft grinding machines, including use of cam doctors
- cleaning and inspection procedures, including:
 - determining camshaft lobe profile and timing requirements
 - checking camshaft centre run-out
 - checking camshaft for bend
- procedures for preparing camshaft grinding wheel, including:

- dressing and truing to restore original cutting geometry and correct flatness and roundness
- procedures for camshaft lobe grinding, including:
 - roughing and finishing
- procedures for finalising camshaft grinding, including:
 - finishing
 - phosphating
 - identifying camshaft profile on camshafts
- requirements of Australian standards relevant to engine reconditioning, including:
 - AS 4182 Automotive repairs – Code of practice for reconditioning reciprocating spark ignition engines
 - AS 4427 Automotive repairs – Code of practice for reconditioning reciprocating compression ignition engines
- post-grinding procedures, including protection of machined surfaces.

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 camshaft grinding that they have carried out, 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 repair workplace or simulated workplace
- workplace instructions
- manufacturer camshaft specifications
- AS 4182 Automotive repairs – Code of practice for reconditioning reciprocating spark ignition engines
- AS 4427 Automotive repairs – Code of practice for reconditioning reciprocating compression ignition engines
- camshaft from engine as specified in the performance evidence
- engine camshaft grinding machine
- precision measuring equipment, including:
 - dial indicators
 - inside and outside metric and imperial micrometers.

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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