



Australian Government

Assessment Requirements for AURLTZ001 Diagnose and repair light vehicle emission control systems

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:

- diagnose and repair a fault in the emission control systems of two different light vehicles as follows:
 - one from the following systems:
 - positive crankcase ventilation system
 - evaporative control system
 - air injection system
 - one from the following systems:
 - exhaust emission control system
 - exhaust gas recirculation system
 - diesel engine particulate filter system
 - diesel engine selective catalytic reduction (SCR) system.

Knowledge Evidence

Individuals must be able to demonstrate knowledge of:

- work health and safety (WHS) and occupational health and safety (OHS) requirements relating to diagnosing and repairing light vehicle emission control systems, including procedures for working with vehicles that produce toxic emissions
- operating principles light vehicle emission control systems, including:
 - combustion chemistry and combustion emissions
 - engine blow-by
 - fuel volatility

- application, purpose and operation of petrol and diesel light vehicle emission control systems and components, including:
 - evaporative control systems, including:
 - fuel tank vapour space
 - charcoal canister
 - crankcase ventilation systems, including:
 - positive crankcase ventilation (PCV)
 - diesel engine crankcase ventilation systems
 - exhaust emission control systems, including:
 - reduction and oxidation catalytic converters
 - air injection systems
 - diesel engine particulate filter systems
 - diesel engine SCR systems
 - exhaust gas recirculation (EGR) systems
 - emission control through engine design, including:
 - combustion chamber design
 - valve overlap
 - variable valve timing
- diagnostic testing procedures for light vehicle emission control systems, including procedures for testing:
 - evaporative control system operation
 - crankcase ventilation system operation
 - catalytic converter operation
 - air injection system operation
 - diesel engine particulate filter system operation
 - diesel engine SCR system operation
 - exhaust gas analysis
 - EGR system operation
- repair procedures for light vehicle emission control systems, including procedures for removing, replacing and adjusting the systems
- post-repair testing procedures for light vehicle emission control systems.

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 light vehicle emission control systems 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 repair workplace or simulated workplace
- workplace instructions
- manufacturer light vehicle emission control system specifications
- two different light vehicles with emission control systems specified in the performance evidence
- diagnostic equipment for petrol or diesel light vehicle emission control systems, including exhaust gas analyser
- tools, equipment and materials appropriate for repairing petrol or diesel light vehicle emission control systems.

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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