



Australian Government

**Assessment Requirements for AURHTE004
Analyse and evaluate faults in heavy
commercial vehicle engine and fuel 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:

- analyse and evaluate a fault in the:
 - engine system of a heavy commercial vehicle
 - fuel system of a different heavy commercial vehicle
 - engine or fuel system of a third heavy commercial vehicle.

Knowledge Evidence

Individuals must be able to demonstrate knowledge of:

- work health and safety (WHS) and occupational health and safety (OHS) requirements relating to analysing and evaluating faults in heavy commercial vehicle engine and fuel systems, including procedures for working with high fuel pressures
- environmental requirements, including procedures for containing and handling fluids released from engine and fuel systems
- principles and processes involved in planning and implementing analysis and evaluation of engine and fuel system faults
- design and planning of diagnostic procedures of heavy commercial vehicle engine and fuel system faults, including procedures for diagnosing:
 - hydraulic faults
 - mechanical faults
 - electrical faults
- procedures for analysing and evaluating heavy commercial vehicle engine and fuel system faults, including:
 - system failure analysis

- component failure analysis
- types, functions, operation and limitations of the following systems:
 - engine and components
 - fuel system and components
- impact of other associated vehicle systems on engine and fuel system operation, including:
 - engine electrical system and components
 - intake system and components
 - exhaust system and components
 - lubrication system and components
 - cooling system and components
- testing procedures for heavy commercial vehicle engine and fuel systems, including:
 - engine wear analysis
 - engine performance
 - exhaust gas analysis
- types, functions, operation and limitations of diagnostic testing equipment required to analyse and evaluate faults in engine and fuel systems
- procedures for documenting and reporting the system analysis and evaluation process
- requirements of Australian Design Rules (ADRs) relating to heavy commercial vehicle engine and fuel 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 heavy commercial vehicle engine and fuel 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 heavy commercial vehicle engine and fuel system specifications
- three different heavy commercial vehicles with engine or fuel system faults
- diagnostic equipment for heavy commercial vehicle engine and fuel systems
- tools, equipment and materials appropriate for analysing and evaluating heavy commercial vehicle engine and fuel systems.

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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