



Australian Government

**Assessment Requirements for AURLTF002
Diagnose and repair light vehicle diesel fuel
injection systems**

Release: 1

Assessment Requirements for AURLTF002 Diagnose and repair light vehicle diesel fuel injection systems

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 two different light vehicles with diesel engines, in which the work must involve:
 - removing, refitting and timing a diesel high pressure pump
 - removing, refitting and testing injectors
 - bleeding a diesel fuel injection system
 - removing and refitting a low pressure fuel pump.

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 diesel fuel injection systems, including procedures for working with high pressure fuel systems
- environmental requirements, including procedures for trapping, storing and disposing of fluids released from fuel injection systems
- operating principles of diesel fuel injection systems and associated components, including:
 - phases of combustion
 - composition of diesel fuel, including cetane and sulphur content
- application, purpose and operation of diesel fuel injection systems and components, including:
 - high pressure injection pump systems
 - distributor pumps, including axial and radial types
 - in-line injection pump systems

- mechanically controlled unit type systems
- testing procedures for diesel fuel injection systems, including procedures for:
 - assessing exhaust smoke
 - testing low fuel pressure pump
 - testing injector opening pressure and spray pattern
 - testing injector for back leakage and nozzle leakage
 - assessing and testing air induction system
 - assessing and testing engine performance
- repair procedures for diesel fuel injection systems, including procedures for:
 - dismantling, cleaning, adjusting and reassembling conventional and two-spring injectors
 - removing, installing and timing high pressure injection pumps
 - bleeding fuel systems
- post-repair testing procedures for diesel fuel injection systems, including assessing:
 - system leakage
 - engine performance.

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 diesel fuel injection 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 diesel fuel injection specifications
- two different light vehicles with diesel engines with faults
- diagnostic equipment for diesel fuel injection systems
- tools, equipment and materials appropriate for repairing diesel fuel injection 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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