



Australian Government

Assessment Requirements for AURLTE105 Diagnose complex faults in light vehicle diesel engines

Release: 1

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Modification History

Release	Comments
Release 1	This version first released with AUR Automotive Retail, Service and Repair Training Package Version 6.0

Performance Evidence

The candidate must demonstrate the ability to complete the tasks outlined in the elements, performance criteria and foundation skills of this unit, including evidence of the ability to:

- diagnose a complex fault in three different light vehicle diesel engines, in which the work for at least two of the engines must involve one of the following types of complex faults:
 - an intermittent fault
 - a fault that affects more than one system
 - a fault introduced as a result of a system repair
 - an indirect fault caused by the influence of external systems
- develop a testing strategy to diagnose the cause of the complex fault in each of the three engines above.

Knowledge Evidence

The candidate must be able to demonstrate knowledge to complete the tasks outlined in the elements, performance criteria and foundation skills of this unit, including knowledge of:

- methods to locate and interpret information required to diagnose complex faults in light vehicle diesel engines, including:
 - light vehicle diesel engine manufacturer specifications
- workplace procedures required to diagnose complex faults in light vehicle diesel engines, including:
 - establishing the serviceability of tools and equipment
 - documentation procedures
 - housekeeping procedures, including:
 - examination of tools and equipment
 - storage of equipment
 - identification, tagging and isolation of faulty equipment
 - safe disposal of materials

- recycling procedures
- workplace health and safety (WHS) requirements relating to diagnosing complex faults in light vehicle diesel engines, including procedures for working with:
 - hot engine components
 - rotating engine components
 - engine oil and coolants
- environmental requirements, including procedures for trapping, storing and disposing of fluids released from diesel engines
- types of complex faults relating to light vehicle diesel engines, including:
 - intermittent
 - multi-system
 - introduced as a result of system repair
 - indirect, caused by the influence of external systems
- types and key features of light vehicle diesel engines, including:
 - intake, exhaust, lubrication, cooling and engine mounting systems and components
 - turbochargers
 - valve timing
- testing procedures for light vehicle diesel engines, including:
 - abnormal noise analysis
 - compression testing
 - cylinder leak-down testing
 - oil pressure testing
 - component failure analysis
- types, key features and limitations of diagnostic testing equipment required to diagnose complex faults in light vehicle diesel engines
- procedures for accessing and interpreting scan tool system data, including:
 - diagnostic trouble codes (DTCs), including:
 - conditions that set the DTCs
 - conditions for running DTCs
 - live data
 - freeze frame data
 - waveforms
 - vehicle continuous and non-continuous monitored systems.

Assessment Conditions

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 engines 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 engine specifications
- three different light vehicles with complex faults in their diesel engines
- light vehicle diesel engine diagnostic equipment, including:
 - compression gauge
 - vacuum gauge
 - cylinder leak-down gauge
 - oil pressure gauge
- tools, equipment and materials appropriate for diagnosing complex faults in light vehicle diesel engines.

Assessors of this unit must satisfy the requirements for assessors in applicable vocational education and training legislation, frameworks and/or standards.

Links

Companion Volume Implementation Guide is found on VETNet -

<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=b4278d82-d487-4070-a8c4-78045ec695b1>