



Australian Government

Assessment Requirements for AURETR140

Diagnose complex faults in vehicle monitoring and protection systems

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 complex faults in the monitoring and protection systems of two different vehicles, vessels or machinery in which the work for each must involve a different complex fault selected from the following:
 - 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 faults in the above vehicles, vessels or machinery.

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 and repair complex faults in vehicle monitoring and protection systems, including:
 - vehicle monitoring and protection systems system manufacturer specifications
- workplace procedures required to diagnose and repair complex faults in vehicle monitoring and protection systems 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 vehicle monitoring and protection systems, including procedures for:
 - identifying hazards and controlling risks associated with wearing jewellery while working around high electrical currents
- environmental requirements relating to vehicle monitoring and protection systems
- types of complex faults relating to vehicle monitoring and protection systems, including:
 - intermittent
 - multi-system
 - introduced as a result of system repair
 - indirect, caused by the influence of external systems
- key features of vehicle monitoring and protection systems, including:
 - display types, including:
 - liquid crystal display (LCD)
 - vacuum fluorescent display (VFD)
 - cathode ray tube (CRT)
 - heads-up display (HUD)
 - reconfigurable systems
 - electronic analogue display
 - on-board diagnostics
 - remote and wireless monitoring systems
- testing procedures for vehicle monitoring and protection systems, including:
 - using digital multimeter, scan tool and oscilloscope
 - component wear analysis
 - system operation analysis
 - vehicle continuous and non-continuous monitored systems
- key features and limitations of diagnostic testing equipment required to diagnose complex faults relating to vehicle monitoring and protection systems
- 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.

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 monitoring and protection 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 vehicle, vessel or machinery monitoring and protection system specifications
- three different vehicles, vessels or machinery with complex faults in their monitoring and protection systems
- monitoring and protection system diagnostic equipment relating to vehicles, vessels or machinery, including:
 - digital multimeter
 - scan tool
- tools, equipment and materials appropriate for diagnosing complex faults in monitoring and protection systems of vehicles, vessels or machinery.

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>