Australian Government

Assessment Requirements for AURETR137 Diagnose complex faults in light vehicle safety 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 light vehicle safety systems of two different light vehicles, in which the work for each vehicle must involve a different fault chosen 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 two complex faults in the vehicles 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 safety systems, including:
  - light vehicle safety systems system manufacturer specifications
- workplace procedures required to diagnose complex faults in light vehicle safety 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 light vehicle safety systems, including procedures for:
    - identifying hazards and controlling risks associated with:
        - working with high voltages on vehicle electrical systems
        - working around the vehicle's supplementary restraint systems (SRS), including airbags
        - wearing jewellery while working around high electrical currents
    - disarming vehicle airbag and safety restraint systems
- types of complex faults relating to light vehicle safety systems, including:
    - intermittent
    - multi-system
    - introduced as a result of system repair
    - indirect, caused by the influence of external systems
- types, function and operation of light vehicle safety systems, including:
    - active and passive collision avoidance
    - adaptive front lighting systems
    - airbag systems
    - lane keeping assist
    - occupant detection systems
    - radar cruise control
    - roll-over protection
    - seatbelt pre-tensioners
- testing procedures for light vehicle safety systems, including:
    - using digital multimeter, scan tool and oscilloscope
    - vehicle dynamic and static testing
    - component failure analysis
    - vehicle continuous and non-continuous monitored systems
- types and key features of diagnostic testing equipment required to diagnose complex faults in light vehicle safety 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
        - 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 light vehicle safety 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 safety system specifications
- two different light vehicles or light commercial vehicles with complex faults in their safety systems
- light vehicle safety system diagnostic equipment, including:
  - digital multimeter
  - scan tool
- tools, equipment and materials appropriate for diagnosing complex faults in light vehicle safety systems.

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