Australian Government

Assessment Requirements for AURLTD109 Diagnose complex faults in light vehicle steering and suspension 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 a complex fault in the following three systems:
  - steering system of a light vehicle
  - suspension system of a different light vehicle
  - steering or suspension system of a third light vehicle
- the above work must involve developing a testing strategy to diagnose the cause of at least two 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.

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 steering and suspension systems, including:
  - light vehicle steering and suspension system manufacturer specifications
- workplace procedures required to diagnose complex faults in light vehicle steering and suspension 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 steering and suspension systems, including procedures for working with:
    - stored energy in springs, air springs and torsion bars
    - high pressure and high temperature steering system fluids
- environmental requirements, including procedures for trapping, storing and disposing of fluids released from steering and suspension systems
- types of complex faults relating to light vehicle steering and suspension systems, 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 steering and suspension systems, including:
    - hydraulic power assisted steering
    - electric power assisted steering
    - active suspension
    - adaptive suspension
- testing procedures for light vehicle steering and suspension systems, including procedures for:
    - vehicle dynamic and static testing
    - abnormal noise analysis
    - component failure analysis
- types, and key features of diagnostic testing equipment required to diagnose complex faults in light vehicle steering and suspension 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
    - 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 steering and suspension 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 steering and suspension specifications
- three different light vehicles with complex faults in their steering and suspension systems
- steering and suspension system diagnostic equipment
- tools, equipment and materials appropriate for diagnosing complex faults in steering and suspension 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