



Australian Government

Assessment Requirements for AURKTR101

Diagnose and repair electronic over hydraulic control 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 and repair a fault in the following electronic over hydraulic control system components:
 - all four of the following:
 - hydraulic proportional control solenoids (flow, pressure and directional)
 - joysticks, potentiometer or touchscreens
 - sensors and feedback devices
 - electronic control amplifier units
 - at least one of the following:
 - electronic over hydraulic circuitry
 - servo control valves (flow, pressure and directional)
 - electronic control unit (ECU).

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 electronic over hydraulic control systems, including:
 - information provided by customers and supervisors
 - manufacturer specifications and procedures or equivalent documentation
- workplace procedures required to diagnose and repair electronic over hydraulic control systems, including:
 - establishing 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
- disposal of excess materials
- recycling procedures
- workplace health and safety (WHS) requirements relating to diagnosing and repairing electronic over hydraulic control systems, including procedures for:
 - working with high pressure fluid hazards
 - isolating and stabilising machines
- environmental requirements relating to diagnosing and repairing electronic over hydraulic control systems
- operating principles of electronic over hydraulic control systems, including operating principles of flow, pressure and directional control in:
 - electronic open loop circuits
 - electronic semi open loop circuits
 - electronic closed loop circuits
- purpose and operation of systems and components, including:
 - hydraulic proportional control solenoids
 - servo control units
 - sensors
 - feedback devices
 - electronic control amplifier units
 - joysticks
 - electronic control units
 - electronic over hydraulic circuitry
- diagnostic testing procedures for electronic over hydraulic control systems, including:
 - electronic system analysis while using industry-relevant test equipment
 - component wear analysis
 - system operation analysis
- repair procedures for electronic over hydraulic control systems, including procedures for:
 - testing electronic devices
 - replacing electronic devices and adjusting the following:
 - maximum and minimum flow points
 - dither
 - opening ramps
 - closing ramps
- post-repair testing procedures for electronic over hydraulic control 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 electronic over hydraulic control 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 electronic over hydraulic control system specifications
- two different electronic over hydraulic control systems with faults as specified in the performance evidence
- diagnostic equipment for electronic over hydraulic control systems
- tools, equipment and materials appropriate for repairing and adjusting mobile plant electronic over hydraulic control 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>