



Australian Government

Assessment Requirements for AURKTA009

Diagnose complex faults in mobile plant hydraulic systems

Release: 1

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Modification History

Release	Comment
Release 1	New unit of competency.

Performance Evidence

Before competency can be determined, individuals must demonstrate they can perform the following according to the standards defined in this unit's elements, performance criteria, range of conditions and foundation skills:

- diagnose a complex fault in the hydraulic systems of three different mobile plant machinery
- the above diagnosis must involve 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

Individuals must be able to demonstrate knowledge of:

- work health and safety (WHS) and occupational health and safety (OHS) requirements relating to diagnosing complex faults in mobile plant hydraulic systems, including procedures for:
 - managing stored energy in springs and accumulators
 - working with high pressure fluid hazards
 - tagging out and isolating machines, and wheel chocking
- environmental requirements, including procedures for trapping, storing and disposing of fluid released from hydraulic systems
- types of complex faults relating to mobile plant hydraulic systems, including:
 - intermittent
 - multi-system
 - introduced as a result of system repair

- indirect, caused by the influence of external systems
- requirements of AS 1101.1 Graphic symbols for general engineering, Part 1: Hydraulic and pneumatic systems
- types, function and operation of mobile plant hydraulic systems, including:
 - reservoirs
 - accumulators
 - pumps
 - valves
 - actuators
 - motors
 - filters
 - conductors and connectors
- testing procedures for mobile plant hydraulic systems, including:
 - abnormal noise analysis
 - implement creep
 - oil flow and pressure testing
 - excessive internal leakage in both actuators and pumps
 - component failure analysis
- types, functions, operation and limitations of diagnostic testing equipment required to diagnose complex faults in mobile plant hydraulic systems, including:
 - scan tool
 - oil pressure gauge
 - temperature measuring equipment
 - flow meter
- 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
 - continuous and non-continuous monitored systems
- methods and processes for documenting and reporting diagnostic findings and recommendations.

Assessment Conditions

Assessors must satisfy NVR/AQTF assessor requirements.

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 mobile plant hydraulic 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 mobile plant hydraulic system specifications
- hydraulic systems of three different mobile plant machinery with complex faults
- mobile plant hydraulic system diagnostic equipment, including:
 - scan tool
 - flow meter
 - oil pressure gauge
 - temperature measuring equipment
- AS 1101.1 Graphic symbols for general engineering, Part 1: Hydraulic and pneumatic systems
- tools, equipment and materials appropriate for diagnosing complex faults in mobile plant hydraulic systems.

Links

Companion Volume implementation guides are found in VETNet -

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

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