



**Australian Government**

# **Assessment Requirements for AURKTB003**

## **Diagnose complex faults in mobile plant braking systems**

**Release: 1**

## Assessment Requirements for AURKTB003 Diagnose complex faults in mobile plant braking systems

### 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 braking 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 braking 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 hazardous materials and substances released from braking systems, including hydraulic fluid, brake fluids and brake fibres
- types of complex faults relating to mobile plant braking 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 mobile plant braking systems, including:
  - hydraulic pressurised
  - spring applied hydraulically released
  - braking systems, including:
    - multi-disc wet braking systems, including wheel end and inboard mounted
    - disc braking systems
    - parking brake systems
- testing procedures for mobile plant braking systems, including:
  - abnormal noise analysis
  - brake performance test
  - oil pressure and flow testing
  - accumulator pressure
  - component failure analysis
- types, functions, operation and limitations of diagnostic testing equipment required to diagnose complex faults in mobile plant braking 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
  - 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 braking 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 braking system specifications
- braking systems of three different mobile plant with complex faults
- mobile plant braking system diagnostic equipment, including:
  - scan tool
  - brake performance test equipment
  - oil pressure gauge
  - accumulator pressure gauge
  - component wear gauge
- tools, equipment and materials appropriate for diagnosing complex faults in mobile plant braking 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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