



Australian Government

**Assessment Requirements for AURKTE001
Analyse and evaluate faults in mobile plant
engine and fuel 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:

- analyse and evaluate a fault in the:
 - engine system of a mobile plant machine
 - fuel system of a different mobile plant machine
 - engine or fuel system of a third mobile plant machine.

Knowledge Evidence

Individuals must be able to demonstrate knowledge of:

- work health and safety (WHS) and occupational health and safety (OHS) requirements relating to analysing and evaluating faults in mobile plant engine and fuel systems, including procedures for:
 - working with high pressure fuel hazards
 - tagging out and isolating machines
- environmental requirements, including procedures for trapping, storing and disposing of oils and fluids released from engine and fuel systems
- principles and processes involved in planning and implementing analysis and evaluation of mobile plant engine and fuel system faults
- design and planning of diagnostic procedures of mobile plant engine and fuel system faults, including procedures for diagnosing:
 - mechanical faults
 - electrical faults
 - fuel system faults

- procedures for analysing and evaluating mobile plant engine and fuel system faults, including:
 - system failure analysis
 - component failure analysis
- types, functions, operation and limitations of the following systems:
 - engine and components
 - fuel system and components
- impact of other associated vehicle systems on mobile plant engine and fuel system operation, including:
 - engine electrical system and components
 - intake system and components, including:
 - air charge cooling
 - after/inter-cooling arrangements
 - exhaust system and components, including single and multi-staged turbo charging
 - lubrication system and components
 - cooling system and components
- testing procedures for mobile plant engine and fuel systems, including:
 - engine wear analysis
 - engine performance
 - intake, exhaust, crank case and turbocharger boost
 - exhaust gas analysis
 - sensor, actuator and wiring harness integrity
- types, functions, operation and limitations of diagnostic testing equipment required to analyse and evaluate faults in mobile plant engine and fuel systems
- procedures for documenting and reporting the analysis and evaluation process.

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 engine and fuel 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 engine and fuel system specifications
- three different mobile plant machinery with engine and fuel system faults
- diagnostic equipment for mobile plant engine and fuel systems
- tools, equipment and materials appropriate for analysing and evaluating mobile plant engine and fuel systems.

Links

Companion Volume implementation guides are found in VETNet -

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

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