



Australian Government

**Assessment Requirements for AURKTD105
Diagnose complex faults in mobile plant
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 each of the following:
 - steering system of a piece of mobile plant machinery
 - suspension system of a different piece of mobile plant machinery
 - steering or suspension system of a third piece of mobile plant machinery
- develop a testing strategy in the course of the above work 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 mobile plant steering and suspension systems, including:
 - mobile plant steering and suspension system manufacturer specifications
- workplace procedures required to diagnose complex faults in mobile plant 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 mobile plant steering and suspension systems, including procedures for working with:
 - identifying hazards and controlling risks associated with hazardous materials and substances, including hydraulic fluid and nitrogen gas
 - managing stored energy in springs and accumulators
 - working with high pressure and high temperature fluid hazards
 - tagging out and isolating machines, and wheel chocking
- environmental requirements, including procedures for trapping, storing and disposing of oils and fluids released from steering and suspension systems
- types of complex faults relating to mobile plant 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 function of mobile plant steering and suspension systems, including:
 - steering systems, including:
 - articulated steering
 - front wheel steering
 - all wheel steering
 - differential steer
 - steering clutch and brake system
 - suspension systems, including:
 - spring
 - solid rubber
 - gas charged hydraulic
 - hydraulic
- testing procedures for mobile plant steering and suspension systems, including procedures for:
 - operational tests
 - abnormal noise analysis
 - flow, temperature and pressure tests
 - component wear analysis
 - sources of fluid leaks
- types, functions, operation and limitations of diagnostic testing equipment required to diagnose complex faults in mobile plant steering and suspension systems, including flow, temperature and pressure gauges
- 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
- waveforms
- 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 mobile plant 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 mobile plant steering and suspension system specifications
- steering and suspension systems of three different mobile plant machinery with complex faults
- mobile plant steering and suspension system diagnostic equipment, including:
 - flow, temperature and pressure gauges
 - scan tool
- tools, equipment and materials appropriate for diagnosing complex faults in mobile plant 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>