



Australian Government

**Assessment Requirements for AURHTX006
Diagnose complex faults in heavy
commercial vehicle transmission and
driveline systems**

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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 standard defined in this unit's elements, performance criteria, range of conditions and foundation skills:

- diagnose a complex fault in the:
 - transmission system of a heavy commercial vehicle
 - driveline system of a different heavy commercial vehicle
 - transmission or driveline system of a third heavy commercial vehicle
- 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 heavy commercial vehicle transmission and driveline systems, including procedures for lifting, supporting and manual handling heavy commercial vehicle transmission and driveline systems
- environmental requirements, including procedures for trapping, storing and disposing of fluids released from transmission and driveline systems
- types of complex faults relating to heavy commercial vehicle transmission and driveline 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 heavy commercial vehicle transmission and drivelines, including:
 - automatic transmissions
 - manual and automated manual transmissions
 - Hookes-type joints
 - drive shafts
 - final drives
- testing procedures for heavy commercial vehicle transmission and driveline systems, including procedures for:
 - vehicle dynamic and static testing
 - abnormal noise analysis
 - transmission oil pressure tests
 - sources of fluid leaks
 - driveline angle measurement
- types, functions, operation and limitations of diagnostic testing equipment required to diagnose complex faults in heavy commercial vehicle transmission and driveline 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
 - vehicle 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 heavy commercial vehicle transmission and driveline 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 heavy commercial vehicle transmission and driveline system specifications
- three different heavy commercial vehicles with complex faults in their transmission and driveline systems
- transmission and driveline diagnostic equipment, including:
 - oil pressure gauge
 - scan tool
- tools, equipment and materials appropriate for diagnosing complex faults in heavy commercial vehicle transmission and driveline 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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