



Australian Government

**Assessment Requirements for AURHTX005
Analyse and evaluate 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 standards defined in this unit's elements, performance criteria, range of conditions and foundation skills:

- analyse and evaluate a 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.

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 heavy commercial vehicle transmission and driveline systems, including procedures for:
 - lifting, supporting and manually handling heavy vehicle transmissions
 - working with rotating shafts
- environmental requirements, including procedures for trapping, storing and disposing of fluids released from transmission and driveline systems
- principles and processes involved in planning and implementing analysis and evaluation of transmission and driveline system faults
- design and planning of diagnostic procedures of heavy commercial vehicle transmission and driveline system faults, including procedures for diagnosing:
 - hydraulic faults
 - mechanical faults
 - pneumatic faults

- electrical faults
- procedures for analysing and evaluating heavy commercial vehicle transmission and driveline system faults, including:
 - system failure analysis
 - component failure analysis
- types, functions, operation and limitations of the following systems:
 - clutch
 - manual transmission
 - automated manual transmission (AMT)
 - automatic transmission
 - drive shafts
 - final drive assemblies
- testing procedures for heavy commercial vehicle transmission and driveline systems, including:
 - oil and pneumatic pressures
 - transmission performance
 - powertrain management
 - driveline angles
 - driveline vibrations
- types, functions, operation and limitations of diagnostic testing equipment required to analyse and evaluate faults in transmission and driveline systems
- requirements of Australian Design Rules (ADRs) relating to heavy commercial vehicle transmission and driveline 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 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 transmission and driveline system faults

- diagnostic equipment for heavy commercial vehicle transmission and driveline systems
- tools, equipment and materials appropriate for analysing and evaluating heavy commercial vehicle and driveline 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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