



Australian Government

**Assessment Requirements for AURHTX106
Diagnose complex faults in heavy
commercial vehicle transmission and
driveline systems**

Release: 1

Assessment Requirements for AURHTX106 Diagnose complex faults in heavy commercial vehicle transmission and driveline systems

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:
 - 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
- develop a testing strategy to diagnose the cause of at least two of the following complex faults in the course of the above work:
 - 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 heavy commercial vehicle transmission and driveline systems, including:
 - heavy commercial vehicle transmission and driveline system manufacturer specifications
- workplace procedures required to diagnose complex faults in heavy commercial vehicle transmission and driveline 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 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 hazardous materials and substances 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
- key features of heavy commercial vehicle transmission and driveline systems, 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
- key features 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
 - waveforms
 - vehicle 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 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.

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>