



Australian Government

**Assessment Requirements for AURHTQ002
Diagnose and repair heavy commercial
vehicle final drive assemblies**

Release: 1

Assessment Requirements for AURHTQ002 Diagnose and repair heavy commercial vehicle final drive assemblies

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:

- diagnose and repair a fault in one heavy commercial vehicle final drive assembly and:
 - undertake a complete dismantle and reassembly of a crown wheel and pinion final drive assembly
 - remove, refit or replace one final drive assembly
 - remove, refit or replace one rear axle wheel bearing assembly.

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 and repairing heavy commercial vehicle final drive assemblies, including procedures for:
 - isolating and stabilising vehicles
 - lifting and supporting final drive assemblies
- environmental requirements, including procedures for trapping, storing and disposing of oil released from final drive assemblies
- operating principles of heavy commercial vehicle final drive assemblies and associated components, including:
 - final drive gears, including:
 - gear types
 - gear ratios and torque reduction and multiplication
 - differential function

- application, purpose and operation of heavy commercial vehicle final drive assemblies and components, including:
 - single reduction
 - two-speed reduction
 - double reduction
 - tandem drive
 - power divider
 - differentials, including limited slip differentials
 - axle shafts and bearings
- diagnostic testing procedures for heavy commercial vehicle final drive assemblies, including:
 - road-testing procedures, including:
 - final drive assembly noise diagnosis
 - final drive assembly operation
 - pre-dismantling inspection procedures
- repair procedures for heavy commercial vehicle final drive assemblies, including procedures for:
 - dismantling assemblies
 - inspecting assemblies
 - reassembling and adjusting the following components:
 - pinion depth
 - pinion bearing preload
 - crown wheel and pinion backlash
 - side bearing preload
 - crown wheel and pinion tooth contact
- post-repair testing procedures for heavy commercial vehicle final drive assemblies.

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 final drive assemblies 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:

- mechanical repair workplace or simulated workplace

- workplace instructions
- manufacturer final drive assembly specifications
- heavy commercial vehicle crown wheel and pinion final drive assembly with faults
- diagnostic equipment for heavy commercial vehicle final drive assemblies
- tools, equipment and materials appropriate for repairing and adjusting heavy commercial vehicle final drive assemblies.

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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