



Australian Government

Assessment Requirements for AURHTQ102 Diagnose and repair heavy commercial vehicle final drive assemblies

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 and repair a fault in at least one heavy commercial vehicle final drive assembly and in the course of doing so:
 - 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

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 and repair heavy commercial vehicle final drive assemblies, including:
 - information provided by customers and supervisors
 - manufacturer specifications and procedures or equivalent documentation
- workplace procedures required to diagnose and repair heavy commercial vehicle final drive assemblies, including:
 - establishing 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
 - disposal of excess materials
 - recycling procedures

- workplace health and safety (WHS) 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 relating to diagnosing and repairing heavy commercial vehicle final drive assemblies, including procedures for trapping, storing and disposing of oils 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
- 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 procedures for:
 - road testing procedures, including:
 - final drive assembly noise diagnostic
 - final drive assembly operation
 - pre-dismantling inspection procedures
- repair procedures for heavy commercial vehicle final drive assemblies, including procedures for:
 - dismantling final drive assemblies
 - inspecting final drive 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

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.

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>