



Australian Government

Assessment Requirements for AURHTD002 Diagnose and repair heavy commercial vehicle steering systems

Release: 1

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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:

- diagnose and repair a fault in one of the following heavy commercial vehicle steering systems:
 - electronically assisted steering
 - hydraulic power assisted steering
- diagnose and repair a fault in three of the following heavy commercial vehicle steering components:
 - power steering pump
 - hydraulic and electronic valves
 - tie rods and linkages
 - king pin
 - front wheel bearings.

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 steering systems, including procedures for working with high pressure steering systems
- environmental requirements, including procedures for trapping, storing and disposing of power steering hydraulic fluid released from steering systems
- operating principles of heavy commercial vehicle steering systems and associated components, including:
 - manual steering systems

- power assisted steering systems
- application, purpose and operation of heavy commercial vehicle steering systems and components, including:
 - manual steering systems, including:
 - steering box
 - steering column
 - tie rods and linkages
 - king pins
 - wheel bearings
 - hydraulic power assisted steering systems, including:
 - integral piston steering box
 - power steering pump
 - hydraulic and electronic valves
 - twin axle steering systems
 - electronically assisted steering systems
- identification, function and basic operating principles of steering angles, including:
 - Ackermann principle of steering
 - toe-in and toe-out
 - toe-out on turns
 - caster
 - camber
 - steering axis inclination
- diagnostic testing procedures for heavy commercial vehicle steering systems, including:
 - operational testing
 - hydraulic steering system testing
 - electronic and load sensing steering testing
 - analysing component wear analysis
- repair procedures for heavy commercial vehicle steering system components, including:
 - power steering pump
 - steering box
 - steering column
 - king pin
 - electronically assisted steering
 - tie rods and linkages
 - wheel bearings
- post-repair testing procedures for heavy commercial vehicle steering systems.

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 steering systems or components 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 steering system specifications
- heavy commercial vehicle with faults in the power assisted steering systems and components specified in the performance evidence
- diagnostic equipment for heavy commercial vehicle steering systems
- tools, equipment and materials appropriate for repairing and adjusting heavy vehicle steering 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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