



Australian Government

Assessment Requirements for AURHTD005

Analyse and evaluate faults in heavy commercial vehicle steering and suspension 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:
 - steering system of a heavy commercial vehicle
 - suspension system of a different heavy commercial vehicle
 - steering or suspension 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 steering and suspension systems, including procedures for working with:
 - stored energy in springs, air springs, torsion bars and air storage
 - high pressure and high temperature steering system fluids
- environmental requirements, including procedures for trapping, storing and disposing of hydraulic fluid released from steering and suspension systems
- principles and processes involved in planning and implementing analysis and evaluation of steering and suspension system faults
- design and planning of diagnostic procedures of heavy commercial vehicle steering and suspension system faults, including procedures for diagnosing:
 - hydraulic faults
 - mechanical faults
 - pneumatic faults

- electrical faults
- procedures for analysing and evaluating heavy commercial vehicle steering and suspension system faults, including:
 - system failure analysis
 - component failure analysis
- types, functions, operation and limitations of the following systems:
 - steering system, including:
 - steering system theory, including steering angles
 - mechanical steering system components
 - power assisted steering system
 - suspension system, including:
 - spring suspension
 - air suspension
 - influences of trailer operations on the heavy commercial vehicle:
 - steering performance
 - suspension performance
- associated vehicle systems and their impact on steering and suspension system operation, including trailers and loads
- testing procedures for heavy commercial vehicle steering and suspension systems, including:
 - steering component wear
 - power assisted steering pressures and operation
 - suspension component wear
 - wheel and chassis alignment
 - axle parallelism
- types, functions, operation and limitations of diagnostic testing equipment required to analyse and evaluate faults in steering and suspension systems
- procedures for documenting and reporting the analysis and evaluation process
- requirements of Australian Design Rules (ADRs) relating to heavy commercial vehicle steering and suspension 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 and suspension 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 steering and suspension system specifications
- three different heavy commercial vehicles with steering and suspension system faults
- diagnostic equipment for heavy commercial vehicle steering and suspension systems
- tools, equipment and materials appropriate for analysing and evaluating heavy commercial vehicle steering and suspension 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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