



Australian Government

AURHTY001 Inspect and service mechanical connections of heavy vehicles and trailers over 4.5 tonnes

Release: 1

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Modification History

Release	Comment
Release 1	New unit of competency.

Application

This unit describes the performance outcomes required to inspect and service mechanical connections fitted to both heavy vehicles and trailers over 4.5 tonnes. It involves preparing for the task, inspecting the mechanical connections, reporting the inspection findings, servicing and adjusting the connections, and completing workplace processes and documentation.

It applies to those working in the automotive service and repair industry. The mechanical connections of heavy vehicles and trailers over 4.5 tonnes include those of agricultural machinery, heavy commercial vehicles or mobile plant machinery.

No licensing, legislative, regulatory or certification requirements apply to this unit at the time of publication.

Competency Field

Mechanical - Heavy Vehicle

Unit Sector

Technical - Chassis and Frame

Elements and Performance Criteria

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Elements describe the essential outcomes.	Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold and italicised text is used, further information is detailed in the range of conditions section.

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1. Prepare to inspect and service mechanical connection system	1.1 Job requirements are determined from workplace instructions 1.2 Servicing information relating to <i>mechanical connections of heavy vehicle and trailer</i> is sourced and interpreted 1.3 Hazards associated with the work are identified and risks are managed 1.4 Tools, equipment and materials are selected and checked for serviceability
2. Inspect mechanical connection system	2.1 Inspection is carried out according to manufacturer specifications, workplace procedures and <i>safety requirements</i> 2.2 Inspection results are compared with manufacturer specifications 2.3 Inspection findings are reported according to workplace procedures, including recommendations for necessary repairs or adjustments
3. Service mechanical connection system	3.1 <i>Service</i> and adjustments are carried out according to manufacturer specifications, workplace procedures, and safety and <i>environmental requirements</i> , and without causing damage to components or systems 3.2 Post-service testing is carried out according to workplace procedures
4. Complete work processes	4.1 <i>Final inspection</i> is made to ensure work is to workplace expectations and vehicle and trailer are presented ready for use 4.2 Work area is cleaned, waste and non-recyclable materials are disposed of, and recyclable material is collected 4.3 Tools and equipment are checked and stored according to workplace procedures 4.4 Workplace documentation is processed according to workplace procedures

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential to performance and are not explicit in the performance criteria.

Skills	Description
Learning skills to:	locate appropriate sources of information efficiently.

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Reading skills to:	interpret information from manufacturer and workshop literature when seeking service procedures and specifications relating to mechanical connections of heavy vehicles and trailers over 4.5 tonnes.
Writing skills to:	legibly and accurately fill out workplace documentation when reporting inspection findings, making recommendations, and recording parts and material used.
Oral communication skills to:	- clarify instructions - report inspection findings and make repair recommendations.
Numeracy skills to:	use mathematical operations, including addition and subtraction, to measure and compare components to manufacturer specifications and tolerances.
Technology skills to:	use measuring tools and gauges.

Range of Conditions

This section specifies work environments and conditions that may affect performance.

Essential operating conditions that may be present (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) are included.

Bold italicised wording, if used in the performance criteria, is detailed below.

<i>Mechanical connections of heavy vehicle and trailer</i> must include:	- fifth wheel systems - king pins - landing gear systems.
<i>Safety requirements</i> must include:	- work health and safety (WHS) and occupational health and safety (OHS) requirements, including procedures for: - lifting and supporting heavy vehicles and trailers - safely manoeuvring heavy vehicles and trailers.
<i>Service</i> must include:	- applying and replacing lubricant - undertaking adjustments and operational testing.
<i>Environmental requirements</i> must include:	environmental requirements, including procedures for trapping, storing and disposing of lubricants released from mechanical connections.
<i>Final inspection</i> must include:	- final check of heavy vehicle mechanical connection systems and components - checking heavy vehicle mechanical connection system operation during mobile or stationary tests.

Unit Mapping Information

Equivalent to AURHTY2001 Inspect and service mechanical connections of heavy vehicles and trailers over 4.5 tonnes

Links

Companion Volume implementation guides are found in VETNet -

<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=b4278d82-d487-4070-a8c4-78045ec695b1>

Assessment Requirements for AURHTY001 Inspect and service mechanical connections of heavy vehicles and trailers over 4.5 tonnes

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Performance Evidence

Before competency can be determined, individuals must demonstrate they can perform the following according to the standard defined in this unit's elements, performance criteria, range of conditions and foundation skills:

- inspect and service the mechanical connections of two different heavy vehicles and their trailers, including five of the following:
 - fifth wheel assembly
 - king pins and upper couplers
 - pintle hook and drawbar
 - landing gear systems
 - electrical connections
 - pneumatic connections.

Knowledge Evidence

Individuals must be able to demonstrate knowledge of:

- work health and safety (WHS) and occupational health and safety (OHS) requirements relating to inspecting and servicing mechanical connections of heavy vehicles and trailers, including procedures for:
 - lifting and supporting heavy vehicles and trailers
 - safely manoeuvring heavy vehicles and trailers
- environmental requirements, including procedures for trapping, storing and disposing of lubricants released from mechanical connections
- identification and function of mechanical connections of heavy vehicles and trailers over 4.5 tonnes, including:
 - fifth wheel assembly

- king pins and upper couplers
- pintle hook and drawbars
- landing gear systems
- electrical connections
- pneumatic connections
- types and applications of mechanical connection lubricants
- inspection procedures for mechanical connections of heavy vehicles and trailers over 4.5 tonnes
- service and adjustment procedures for mechanical connections of heavy vehicles and trailers over 4.5 tonnes
- post-service testing procedures for mechanical connections of heavy vehicles and trailers over 4.5 tonnes.

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 vehicles and trailers over 4.5 tonnes 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 mechanical connection specifications
- two different heavy vehicles and trailers over 4.5 tonnes with mechanical connections requiring servicing
- lubricating equipment for mechanical connections of heavy vehicles and trailers over 4.5 tonnes
- tools, equipment and materials appropriate for inspecting and servicing mechanical connections of heavy vehicles and trailers over 4.5 tonnes.

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