



Australian Government

AURHTR005 Diagnose and repair heavy commercial trailer electronically controlled roll stability systems

Release: 1

AURHTR005 Diagnose and repair heavy commercial trailer electronically controlled roll stability systems

Modification History

Release	Comment
Release 1	New unit of competency.

Application

This unit describes the performance outcomes required to diagnose and repair faults in the electronically controlled roll stability systems of trailers over 4.5 tonnes. It involves preparing for the task, selecting the correct diagnostic procedure, carrying out the diagnosis and the repair, performing post-repair testing, and completing workplace processes and documentation.

It applies to those working in the automotive service and repair industry. The electronically controlled roll stability systems are fitted to heavy commercial trailers.

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

Competency Field

Mechanical - Heavy Vehicle

Unit Sector

Technical - Electrical and Electronic

Elements and Performance Criteria

Elements	Performance Criteria
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.
1. Prepare to diagnose and repair heavy trailer electronically controlled	1.1 Job requirements are determined from workplace instructions 1.2 Diagnostic information is sourced and interpreted 1.3 Diagnostic options are analysed and those most appropriate to the

roll stability system	circumstances are selected 1.4 Hazards associated with the work are identified and risks are managed 1.5 Diagnostic tools and equipment are selected and checked for serviceability
2. Diagnose roll stability system	2.1 Diagnostic tests are carried out according to manufacturer specifications, workplace procedures, and safety requirements 2.2 Faults are identified from diagnostic test results and causes of faults are determined 2.3 Diagnosis findings, including recommendations for necessary repairs or adjustments, are reported according to workplace procedures
3. Repair roll stability system	3.1 Repair information is sourced and interpreted 3.2 Repair options are analysed and those most appropriate to the circumstances are selected 3.3 Repair tools, equipment and materials are selected and checked according to manufacturer procedures 3.4 Repairs and component replacements and adjustments are carried out according to manufacturer specifications, workplace procedures and safety requirements, and without causing damage to components or systems 3.5 Post-repair testing is carried out according to workplace procedures to confirm fault rectification, and any further problems detected as having been introduced during the repair process are rectified
4. Complete work processes	4.1 Final inspection is made to ensure work is to workplace expectations and system is 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 cleaned 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.

Reading skills to:	interpret information from manufacturer and workshop literature when seeking roll stability system specifications and procedures.
Writing skills to:	legibly and accurately fill out workplace documentation when reporting diagnostic findings, making repair recommendations, and recording parts and material used.
Oral communication skills to:	- clarify instructions - report diagnostic findings and make repair recommendations.
Numeracy skills to:	measure roll stability system components and use basic mathematical operations, including addition and subtraction, to calculate electronic tolerances and deviations from manufacturer specifications.
Planning and organising skills to:	plan own work requirements and prioritise actions to achieve required outcomes and ensure tasks are completed within workplace timeframes.
Technology skills to:	operate diagnostic and electrical test equipment.

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>Safety requirements</i> must include:	- work health and safety (WHS) and occupational health and safety (OHS) requirements, including procedures for: - diagnosing and repairing heavy trailer electronically controlled roll stability systems - using specialised tools and equipment.
<i>Post-repair testing</i> must include:	- validating effectiveness of repair action - confirming that reported fault has been rectified.

Unit Mapping Information

Equivalent to AURHTR3005 Diagnose and repair heavy trailer electronically controlled roll stability systems

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 AURHTR005 Diagnose and repair heavy commercial trailer electronically controlled roll stability systems

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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 the electronically controlled roll stability systems of two different heavy commercial trailers.

Knowledge Evidence

Individuals must be able to demonstrate knowledge of:

- work health and safety (WHS) and occupational health and safety (OHS) requirements including procedures for:
 - diagnosing and repairing heavy trailer electronically controlled roll stability systems
 - using specialised tools and equipment
- application, purpose and operating principles of heavy commercial trailer electronically controlled roll stability systems and components, including:
 - roll stability control module
 - wheel speed sensor
 - yawl sensor
 - load sensor
 - electrical wiring and connector
- diagnostic testing procedures for heavy commercial trailer electronically controlled roll stability systems, including:
 - accessing and interpreting diagnostic trouble codes
 - analysing system operation using electrical test equipment, scan tools and other industry-relevant test equipment

- visual, aural and functional assessments, including component damage and wear
- repair procedures for heavy commercial trailer electronically controlled roll stability systems and their components, including:
 - roll stability control module
 - wheel speed sensor
 - yawl sensor
 - load sensor
 - electrical wiring and connector
- post-repair testing procedures for heavy trailer electronically controlled roll stability 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 trailer electronically controlled roll stability 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 trailer roll stability specifications
- two different heavy commercial trailers with faults in their electronically controlled roll stability systems
- diagnostic equipment for heavy trailer electronically controlled roll stability systems
- tools, equipment and materials appropriate for repairing and adjusting heavy trailer electronically controlled roll stability systems.

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