



Australian Government

**Assessment Requirements for AURHTB101
Diagnose and repair heavy vehicle air
braking systems**

Release: 1

Assessment Requirements for AURHTB101 Diagnose and repair heavy vehicle air braking systems

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 three heavy vehicle air braking systems as follows:
 - one disc braking system, in which the work must involve removing and refitting or replacing the brake actuators, disc pads and disc rotors
 - one drum braking system, in which the work must involve removing and refitting or replacing the brake actuators, brake shoes and drums
 - one air braking system, in which the work must involve removing and refitting or replacing at least one of the following:
 - air compressor, delivery and storage components
 - slack adjusters
 - pneumatic valve
 - electro-pneumatic valve and electronic control circuits.

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 vehicle air braking systems, including:
 - information provided by customers and supervisors
 - manufacturer specifications and procedures or equivalent documentation
- workplace procedures required to diagnose and repair heavy vehicle air braking systems, 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
- Australian Design Rules ADR35 and ADR38 relating to repairing heavy vehicle brakes, including:
 - key features and differences of both American and European braking systems
- workplace health and safety (WHS) requirements relating to diagnosing and repairing heavy vehicle air braking systems, including procedures for:
 - working safely with stored energy in springs and high air pressure systems
 - managing and controlling brake dust
 - removing and refitting wheel assemblies
- environmental requirements relating to diagnosing and repairing heavy vehicle air braking systems, including procedures for trapping, storing and disposing of hazardous materials and substances released from braking systems, including brake dust and fibres
- operating principles of heavy vehicle air braking systems and associated components, including:
 - levers
 - friction
 - pneumatics
 - electronics
- purpose and operation of heavy vehicle air braking systems and components, including:
 - disc braking systems
 - drum braking systems
 - air compressors, air storage, air dryers and valves
 - brake actuators
 - foot valves
 - air control valves
 - manual and automatic slack adjusters
 - trailer brake valves
 - pneumatic and electronic control circuits and valves
- diagnostic testing procedures for heavy vehicle air braking systems, including procedures for:
 - friction material wear
 - drum brake component serviceability
 - disc brake component serviceability
 - air pressure testing
 - air control system testing
 - air brake component inspection and evaluation
 - brake system stationary and mobile performance tests
- repair procedures for heavy vehicle air braking systems, including:

- procedures for removing, replacing and adjusting:
 - wheel end components, including disc braking systems and drum braking systems
 - air compressors, air storage, air dryers and valves
 - brake actuators
 - foot valves
 - manual and automatic slack adjusters
 - trailer brake valves
 - pneumatic and electronic control circuits and valves
- dismantling, repairing, reassembling and adjusting systems
- post-repair testing procedures for heavy vehicle air braking systems including stationary and mobile performance tests.

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 vehicle air braking 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 braking system specifications
- two different heavy vehicles with faults in the air braking systems specified in the performance evidence
- diagnostic equipment for heavy vehicle air braking systems
- Australian Design Rules ADR35 and ADR38
- tools, equipment and materials appropriate for repairing and adjusting heavy vehicle air braking systems.

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>