



Australian Government

AURTTB004 Inspect and service air braking systems

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 air braking systems according to manufacturer specifications. It involves preparing for the task, inspecting the system, reporting the inspection findings, servicing and adjusting the system, and completing workplace processes and documentation.

It applies to those working in the automotive service and repair industry. The air braking systems 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 Miscellaneous

Unit Sector

Technical - Brakes

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 inspect and service air braking system	1.1 Job requirements are determined from workplace instructions 1.2 Servicing information is sourced and interpreted 1.3 Hazards associated with the work are identified and risks are managed

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.
	1.4 Tools, equipment and materials are selected and checked for serviceability
2. Inspect air braking system	2.1 Inspection is carried out according to manufacturer specifications, workplace procedures, and <i>safety and environmental 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 air braking system	3.1 Service and adjustments are carried out according to manufacturer specifications, workplace procedures, and safety and environmental requirements, and without causing damage to <i>components</i> or systems 3.2 <i>Post-service testing</i> is carried out according to workplace procedures
4. Complete work processes	4.1 Final inspection is made to ensure work is to workplace expectations and vehicle 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 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.
Reading skills to:	interpret information from manufacturer and workshop literature when seeking inspection and service procedures and specifications relating to air braking systems.

Skills	Description
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:	- measure brake components and use basic mathematical operations, including addition and subtraction, to calculate distances, tolerances and deviations from manufacturer specifications - interpret measuring equipment scales.
Technology skills to:	use precision measuring equipment, such as vernier calipers.

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 and environmental requirements</i> must include:	- work health and safety (WHS) and occupational health and safety (OHS) requirements, including procedures for: - managing and controlling brake dust - working with stored energy - environmental requirements, including procedures for trapping, storing and disposing of brake dust released from air braking systems.
<i>Components</i> must include:	- air compressor, filters, air drier, receivers and tanks - drive belts - spring brake chambers, hoses and adjusters - discs, pads, drums and linings - brake valves - brake lights - trailer brake valves.
<i>Post-service testing</i> must include:	static and dynamic testing of braking system.

Unit Mapping Information

Equivalent to AURTTB2004 Inspect and service air braking 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 AURTTB004 Inspect and service air braking 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:

- inspect and service the air braking systems of two different vehicles or machinery, including:
 - one air disc braking system
 - one air drum braking system.

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 air braking systems, including procedures for:
 - managing and controlling brake dust
 - working with stored energy
- environmental requirements, including procedures for trapping, storing and disposing of brake dust released from air braking systems
- identification and function of major air braking components, including:
 - air compressor, filters, air drier, receivers and tanks
 - drive belts
 - spring brake chambers, hoses and adjusters
 - discs, pads, drums and linings
 - brake valves
 - brake lights
 - trailer brake valves
- basic operation of air braking systems, including:

- mechanical
- pneumatic
- inspection procedures for air braking systems, including:
 - component wear analysis
 - air system assessment
- service and adjustment procedures for air braking systems, including:
 - brake adjustment
 - parking and emergency brake adjustment
- post-service testing procedures for air braking systems, including static and dynamic testing.

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 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 air braking system specifications
- two different vehicles or machinery with air disc and air drum braking systems requiring servicing
- tools, equipment and materials appropriate for inspecting and servicing air braking systems.

Links

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