



Australian Government

AURTTA014 Assemble and install pneumatic system components

Release: 1

AURTTA014 Assemble and install pneumatic system components

Modification History

Release	Comment
Release 1	New unit of competency.

Application

This unit describes the performance outcomes required to assemble and install pneumatic system components. It involves preparing for the task, assembling and installing pneumatic system components, performing post-assembly testing, and completing workplace processes and documentation.

It applies to those working in the automotive service and repair industry. The pneumatic 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

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 assemble, install and test pneumatic system components	1.1 Job requirements are determined from workplace instructions 1.2 Assembly, installation and test procedures and information are sourced and interpreted 1.3 Hazards associated with the work are identified and risks are

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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.
	managed 1.3 Tools and equipment are selected and checked for serviceability
2. Carry out assembly and installation activities	2.1 Pneumatic system components are assembled according to job requirements 2.2 Components are installed according to manufacturer specifications, workplace procedures, and safety and environmental requirements 2.3 Components are adjusted according to manufacturer specifications and workplace procedures, and without causing damage to components or system
3. Test pneumatic system	3.1 Testing procedures and information are sourced and interpreted from manufacturer procedures and specifications 3.2 System tests are carried out according to manufacturer specifications, workplace procedures, and safety and environmental requirements 3.3 Post-assembly testing 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 pneumatic 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 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 pneumatic system specifications and procedures.

Skills	Description
Writing skills to:	legibly and accurately fill out workplace documentation when recording parts and material used.
Oral communication skills to:	- clarify workplace instructions and determine job requirements - gain information from appropriate persons and assistance as required.
Numeracy skills to:	- measure pneumatic system components and use basic mathematical operations, including addition and subtraction, to calculate distances, tolerances and deviations from manufacturer specifications - understand measuring and test equipment divisions.
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:	use pneumatic pressure 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>Safety and environmental requirements</i> must include:	- work health and safety (WHS) and occupational health and safety (OHS) requirements, including procedures for dealing with stored pressure hazards - environmental requirements, including procedures for trapping, storing and disposing of oils and fluids released from the system.
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Unit Mapping Information

Equivalent to AURTTA3014 Assemble and install pneumatic systems and components

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 AURTTA014 Assemble and install pneumatic system components

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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:

- assemble and install two different pneumatic system components, in which the work must involve adjusting and testing the installed pneumatic 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 relating to assembling and installing pneumatic systems, including procedures for dealing with stored pressure hazards
- environmental requirements, including procedures for trapping, storing and disposing of oils and fluids released from the system
- types and applications of pneumatic systems
- types, application and operation of pneumatic system components, including:
 - compressors
 - linear actuators
 - rotary actuators
 - drive motors
 - lines, hoses and couplings
 - control valves
- pneumatic system assembly and installation procedures
- key features of pneumatic system schematic diagrams and symbols
- key features of engineering drawings relating to pneumatic systems
- post-installation testing procedures.

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 pneumatic system components that they have assembled and installed, 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 pneumatic system specifications
- two different vehicles or machinery requiring the installation of pneumatic systems
- test equipment for pneumatic systems
- tools, equipment and materials appropriate for assembling and installing pneumatic system components.

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