



Australian Government

AURVTN133 Service and repair air compressors and components

Release: 1

AURVTN133 Service and repair air compressors and components

Modification History

Release	Comments
Release 1	This version first released with AUR Automotive Retail, Service and Repair Training Package Version 6.0

Application

This unit describes the skills and knowledge required to test, service and repair air compressors and associated components. This unit involves preparing for the task, cleaning and replacing filters, making adjustments and necessary repairs according to workplace instructions, and completing workplace processes and documentation.

The unit applies to those working in the automotive service and repair industry. The compressors are for workshop air supply, drilling rigs or mobile compressors. This unit is not for air brake compressors on heavy vehicles.

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

Unit Sector

Vehicle Body Technical - Body

Elements and Performance Criteria

ELEMENTS	PERFORMANCE CRITERIA
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Prepare to service and repair air compressor and components	1.1 Determine job requirements from workplace instructions 1.2 Source and interpret service and repair procedures and information 1.3 Identify hazards associated with the work and manage risks 1.4 Select and check tools, equipment and materials for serviceability
2. Determine service and repair requirements	2.1 Inspect and test air compressor and components according to manufacturer specifications, workplace procedures, and safety and environmental requirements 2.2 Report inspection findings according to workplace procedures

ELEMENTS	PERFORMANCE CRITERIA
3. Service and repair air compressor and components	3.1 Analyse service and repair options and select those required for the circumstances 3.2 Carry out service, repair, and component replacement and adjustment, according to manufacturer specifications, workplace procedures, and safety and environmental requirements, and without causing damage to components or systems 3.3 Carry out post-repair testing according to workplace procedures
4. Complete work processes	4.1 Conduct final inspection according to workplace procedures and confirm vehicle is ready for use 4.2 Clear work area and dispose of or recycle materials according to workplace procedures 4.3 Complete documentation according to workplace procedures

Foundation Skills

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

SKILL	DESCRIPTION
Learning	Locates required sources of information efficiently.
Numeracy	- Measures air compressor system components and uses basic mathematical operations, including addition and subtraction - Calculates deviations and tolerances from manufacturer specifications.
Oral communication	- Clarifies workplace instructions and determine job requirements - Obtains information from customers and supervisors.
Reading	Interprets information from manufacturer and workshop literature when seeking air compressor system specifications and procedures.
Planning and organising	- Plans own work requirements - Prioritises actions to achieve required outcomes - Ensures tasks are completed within workplace timeframes.
Technology	Uses precision measuring equipment.

Unit Mapping Information

Supersedes and is equivalent to AURVTN033 Service and repair air compressors and components.

Links

Companion Volume Implementation Guide is found on VETNet -

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

Assessment Requirements for AURVTN133 Service and repair air compressors and components

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:

- service and repair at least two different air compressors, in which the work must involve the following components:
 - air compressor motor
 - air compressor tank
 - drive system
 - pressure regulator
 - water trap and filters
 - air lines and fittings.

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 service and repair air compressors and components, including:
 - information provided by customer and supervisors
 - manufacturer specifications and procedures or equivalent documentation
- workplace procedures required to service and repair air compressors and components, including:
 - establishing serviceability of tools and equipment
 - documentation and reporting procedures, including:
 - recommendations for required service, repair, replacement or adjustment
 - housekeeping procedures, including:
 - examination of tools and equipment
 - storage of equipment
 - identification, tagging and isolation of faulty equipment

- disposal of excess materials
 - recycling procedures
- work health and safety (WHS) requirements relating to servicing and repairing air compressors and components, including procedures for:
 - selecting and using personal protective equipment (PPE)
 - working with compressed air
 - working with rotating shafts, belts and pulleys
- environmental requirements, including procedures for trapping, storing and disposing of air compressor fluids released during service and repair process
- types of air compressors and principles of operation, including:
 - reciprocating compressors
 - rotary screw compressors
 - vane
 - diaphragm
 - single and two-stage compressors
- identification, function and operation of air compressor system components, including:
 - air compressor motor
 - air compressor tank
 - drive system
 - pressure regulator
 - water trap and filters
 - air lines and fittings
- types and applications of compressor lubricants
- procedures for final inspection and adjustment of air compressors and components, including:
 - compressor cut-out pressure
 - minimising unintended air loss
 - automatic timing switch adjustment.

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 air compressors that they have serviced and repaired, 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 workplace or simulated workplace

- workplace instructions
- manufacturer air compressor specifications
- two different operating air compressors and components as specified in the performance evidence requiring service and repair
- tools, equipment and materials appropriate for servicing and repairing air compressors and components.

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>