



Australian Government

AURBTD104 Repair and overhaul bicycle suspension systems

Release: 1

AURBTD104 Repair and overhaul bicycle suspension systems

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 repair and overhaul bicycle suspension systems. The unit involves preparing for the work, selecting and using specialist tools and equipment, inspecting, repairing and testing the bicycle suspension and components, and completing workplace processes and documentation.

The unit applies to those working in the bicycle retail, service and repair industry.

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

Unit Sector

Bicycle Technical - Steering and Suspension

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 repair and overhaul bicycle suspension system	1.1 Determine job requirements from workplace instructions 1.2 Access and interpret manufacturer specifications, workplace procedures and other required technical information 1.3 Identify hazards associated with the work and manage risks 1.4 Select and check tools and equipment for serviceability 1.5 Plan work to avoid damage to bicycle, minimise waste and use time efficiently
2. Inspect suspension system	2.1 Check bicycle suspension system for faults and worn or damaged components using visual inspection methods and by comparison of measurements against manufacturer specifications 2.2 Identify, document and cost repair and replacement options

ELEMENTS	PERFORMANCE CRITERIA
	for customer approval according to workplace procedures 2.3 Prepare work area, replacement parts and bicycle for repair work
3. Carry out repair and overhaul of suspension system	3.1 Carry out repair and overhaul activities according to workplace procedures, work plan, and safety and environmental requirements 3.2 Check and fit required replacement parts according to manufacturer specifications 3.3 Check and test repaired suspension system for required operation according to manufacturer specifications 3.4 Adjust repaired suspension system and align as required according to workplace procedures 3.5 Report results and quality issues to authorised personnel as required
4. Complete work processes	4.1 Conduct final inspection according to workplace procedures and confirm bicycle 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.
Oral communication	Asks questions to clarify instructions and requirements, including with the customer.
Problem solving	Identifies technical and operational faults and defects, quality issues and potential problems associated with bicycle suspension systems.
Technology	Uses specialist bicycle tools and equipment in line with workplace procedures.

Unit Mapping Information

Supersedes and is equivalent to AURBTD004 Repair and overhaul bicycle suspension systems.

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 AURBTD104 Repair and overhaul bicycle suspension systems

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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:

- repair and overhaul at least one of each of the following three different bicycle suspension systems according to manufacturer specifications:
 - elastomer and spring units system
 - mechanical system
 - hydraulic system.

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 repair and overhaul bicycle suspension systems, including:
 - information provided by customer and supervisors
 - manufacturer specifications and procedures or equivalent documentation
- workplace procedures required to repair and overhaul bicycle suspension 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
- work health and safety (WHS) requirements relating to repairing and overhauling bicycle suspension systems, including procedures for:

- manually handling bicycles and their suspension systems
- identifying workplace hazards
- using tools and equipment, including personal protective equipment (PPE)
- environmental requirements, including procedures for disposing of waste materials
- key bicycle suspension terminology
- types of bicycle suspension systems, system components and their functions
- application of mechanical and hydraulic principles as they relate to bicycle suspension systems
- suspension system components, including:
 - elastomer and spring units
 - mechanical system
 - pneumatic system
 - hydraulic system
- types and use of tools and equipment used to repair and overhaul bicycle suspension systems
- techniques and processes for repairing and overhauling bicycle suspension systems, including:
 - selection and checking of personal protective equipment
 - identification of bicycle suspension components, materials and specifications
 - fault identification
 - measuring techniques
 - suspension system adjustment techniques
 - suspension system testing procedures.

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 bicycle suspension systems that they have repaired and overhauled, 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:

- bicycle workplace or simulated workplace, including location to test bicycle suspension system
- workplace instructions detailing job requirements
- manufacturer specifications and technical information for bicycle suspension systems
- PPE required to repair and overhaul bicycle suspension systems
- component parts as required

- three different bicycles with suspension systems requiring repair and overhaul
- tools and equipment appropriate for repairing and overhauling bicycle suspension systems.

Assessors of this unit must satisfy the requirements for assessors in applicable vocational education and training legislation, frameworks and/or standards.

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