



Australian Government

AURBTD004 Repair and overhaul bicycle suspension systems

Release: 1

AURBTD004 Repair and overhaul bicycle suspension systems

Modification History

Release	Comment
Release 1	New unit of competency.

Application

This unit describes the performance outcomes required to repair and overhaul bicycle suspension systems. It 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.

It 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.

Competency Field

Bicycle

Unit Sector

Technical - Steering and Suspension

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 repair and overhaul bicycle suspension system	1.1 Job requirements are determined from workplace instructions 1.2 Manufacturer specifications, workplace procedures and other relevant technical information are accessed and interpreted 1.3 Hazards associated with the work are identified and risks are managed 1.4 Tools and equipment, including personal protective equipment

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.
	(PPE), are selected and checked for serviceability 1.5 Work is planned to avoid damage to bicycle, minimise waste and use time efficiently
2. Inspect suspension system	2.1 Bicycle suspension system is checked for faults and worn or damaged components using visual inspection methods and by comparing measurements against manufacturer specifications 2.2 Repair and replacement options are identified, documented and costed for customer approval according to workplace procedures 2.3 Work area, replacement parts and bicycle are prepared for repair work
3. Carry out repair and overhaul of suspension system	3.1 Repair and overhaul activities are carried out according to workplace procedures, work plan, and safety and environmental requirements 3.2 Required replacement parts are checked and fitted according to manufacturer specifications 3.3 Repaired suspension system is checked and tested for correct operation according to manufacturer specifications 3.4 Repaired suspension system is adjusted and aligned as required according to workplace procedures 3.5 Results and quality issues are reported to authorised personnel as required
4. Complete work processes	4.1 Final inspection is made to ensure work meets workplace expectations and bicycle is presented ready for use 4.2 Work area is cleaned, waste and non-recyclable materials are disposed of, and recyclable material is collected and stored 4.3 Tools and equipment are checked, reported if faulty, 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
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Skills	Description
Learning skills to:	locate appropriate sources of information efficiently.
Writing skills to:	legibly and accurately fill out workplace documentation, including repair reports.
Oral communication skills to:	ask questions to clarify instructions and requirements, including with the customer.
Problem solving skills to:	identify technical and operational faults and defects, quality issues and potential problems associated with bicycle suspension systems.
Technology skills to:	use specialist bicycle tools and equipment in line with workplace procedures.

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>Suspension system</i> must include:	- elastomer and spring units - mechanical systems - pneumatic systems - hydraulic systems.
<i>Safety and environmental requirements</i> must include:	- work health and safety (WHS) and occupational health and safety (OHS) requirements, including procedures for: - manually handling bicycles and their suspension systems - identifying workplace hazards - using tools and equipment, including PPE - environmental requirements, including procedures for disposing of waste materials.

Unit Mapping Information

Equivalent to AURBTD3004 Repair and overhaul bicycle suspension 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 AURBTD004 Repair and overhaul bicycle suspension systems

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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:

- repair and overhaul the following three different bicycle suspension systems according to manufacturer specifications:
 - elastomer and spring units system
 - mechanical system
 - hydraulic 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 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:
 - identification of bicycle suspension components, materials and specifications
 - fault identification
 - measuring techniques
 - suspension system adjustment techniques
 - suspension system 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 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.

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