



Australian Government

AURBTJ104 Repair and overhaul bicycle wheels and hubs

Release: 1

AURBTJ104 Repair and overhaul bicycle wheels and hubs

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 wheels with different hub, spoke and rim configurations. The unit involves preparing for the work, selecting and using specialist tools and equipment, repairing and testing the bicycle wheels and hubs to manufacturer specifications, 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 - Wheels and Tyres

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 wheels and hubs	1.1 Determine job requirements from workplace instructions, including wheel and hub repair methods and materials 1.2 Access and interpret manufacturer specifications, workplace procedures and other required technical information 1.3 Inspect bicycle wheels and hubs for worn or damaged components 1.4 Identify and confirm repair options and techniques, and identify hazards associated with the work 1.5 Source replacement wheel and hub parts and components 1.6 Select and check tools and equipment for serviceability 1.7 Plan work avoid damage to bicycle, minimise waste and use

ELEMENTS	PERFORMANCE CRITERIA
	time efficiently 1.8 Prepare work area and wheel and hub for repair or overhaul
2. Carry out repair and overhaul of bicycle wheels and hubs	2.1 Remove bicycle wheels according to manufacturer specifications and safety and environmental requirements 2.2 Check rims and adjust as required 2.3 Check spokes and replace any broken 2.4 Adjust and tension spokes 2.5 Use wheel truing equipment and techniques to check for required operation according to manufacturer specifications and adjust as required, prior to refitting wheel 2.6 Refit wheels and regrease wheel hubs according to workplace procedures 2.7 Report results and quality issues to authorised personnel as required
3. Complete work processes	3.1 Conduct final inspection according to workplace procedures and confirm vehicle is ready for use 3.2 Clear work area and dispose of or recycle materials according to workplace procedures 3.3 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	- Interprets wheel and hub specifications - Calculates quantities of repair materials and components.
Oral communication	Asks questions to clarify instructions and requirements, including with the customer.
Technology	Uses specialist bicycle tools and equipment in line with workplace procedures.

Unit Mapping Information

Supersedes and is equivalent to AURBTJ004 Repair and overhaul bicycle wheels and hubs.

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 AURBTJ104 Repair and overhaul bicycle wheels and hubs

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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 three different bicycle wheels and hubs according to manufacturer specifications, including:
 - at least one spoke wheel
 - at least one disc wheel.

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 wheels and hubs, including:
 - information provided by customer and supervisors
 - manufacturer specifications and procedures or equivalent documentation
- workplace procedures required to repair and overhaul bicycle wheels and hubs, 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 wheels and hubs, including procedures for:
 - manually handling bicycle wheels
 - identifying workplace hazards

- using tools and equipment, including personal protective equipment (PPE)
- environmental requirements, including procedures for disposing of waste materials
- key bicycle wheel and hub terminology
- wheel and hub mechanical principles
- types of bicycle wheel and hub systems and components, and their specifications, including:
 - spoke, disc and tri-spoke wheels
 - conventional, clincher, tubular, aero, deep dished and composite material wheel rims
 - quick release, allen head and nut wheel fasteners
 - disc, drum and coaster and internal foot brake hubs
- types and use of tools and equipment used to repair and overhaul bicycle wheels and hubs
- techniques and processes for repairing and overhauling bicycle wheels and hubs, including:
 - selection and checking of personal protective equipment
 - types of wear or faults in bicycle wheel and hubs
 - measuring techniques
 - torque measurement and adjustment of wheels
 - 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 wheels and hubs 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
- workplace instructions detailing job requirements
- wheel and hub technical and component specifications
- PPE required to repair and overhaul bicycle wheels and hubs
- three different bicycles requiring wheel and hub system repair and overhaul as specified in the performance evidence
- tools and equipment appropriate for repairing and overhauling bicycle wheels and hubs.

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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