



Australian Government

AURBTJ103 Design and build bicycle wheels

Release: 1

AURBTJ103 Design and build bicycle wheels

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 design and build bicycle wheels with different hub, spoke and rim configurations. The unit involves preparing for the work, selecting and using specialist tools and equipment to design and carry out the building and testing of bicycle wheels, 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 design and build bicycle wheels	1.1 Determine job requirements from workplace instructions, including wheel materials, components and spoke patterns 1.2 Research and interpret bicycle wheel design requirements and manufacturer specifications 1.3 Confirm bicycle wheel design and specifications with customer
2. Prepare to build bicycle wheels	2.1 Check wheel components against specifications and inspect for quality prior to build 2.2 Plan bicycle build to use time efficiently 2.3 Identify hazards associated with the work and manage risks 2.4 Select and check tools and equipment for serviceability

ELEMENTS	PERFORMANCE CRITERIA
	2.5 Prepare work area, wheels, components and materials
3. Build and test bicycle wheels	3.1 Build bicycle wheels according to job and customer requirements, work plan, and safety and environmental requirements 3.2 Select bicycle wheel hubs and rims and calculate spoke lengths 3.3 Lace and tension bicycle wheel spokes according to manufacturer specifications and workplace instructions 3.4 Check built bicycle wheels for symmetry and test for trueness against specifications 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.
Numeracy	- Interprets stock codes - Identifies wheel and hub sizes and spoke numbers - Uses basic mathematical operations to calculate: - spoke lengths - settings and adjustments to wheel and hub components.
Oral communication	Asks questions to clarify instructions and requirements, including with customers and suppliers.
Problem solving	- Identifies: - potential faults in wheel design - technical and procedural problems to avoid waste.
Technology	Uses specialist bicycle tools and equipment in line with workplace procedures.

Unit Mapping Information

Supersedes and is equivalent to AURBTJ003 Design and build bicycle wheels.

Links

Companion Volume Implementation Guide is found on VETNet -

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