

Domain	AUTOMOTIVE MECHANICS	Unit ID: 77
Title:	Service wheels and tyres of a motor vehicle in an automotive mechanics workshop	
Level: 2		Credits: 3

Purpose

This unit standard specifies the competencies required to service wheels and tyres of a motor vehicle in an automotive mechanics workshop. It includes repair and balancing procedures of tubes, tyres and rims. This unit standard is intended for those who work in the automotive industry as automotive mechanics.

Special Notes

1. Entry information:
 - Prerequisite
 - Unit 65 - *Apply safety rules and regulations in an automotive mechanics workshop* or demonstrated equivalent knowledge and skills.
2. To demonstrate competence, at a minimum, evidence is required of performing each of the following functions: tyre removal (steel and light alloy), tyre and tube repair (cross or radial), tyre fitting (cross or radial), and tyre balancing (steel and light alloy). Perform these tasks ensuring correct identification of requirements, selection and use of appropriate processes, tools and equipment and completing all work to specification.
3. Assessment evidence may be collected from a real workplace or a simulated real workplace or an appropriate realistic simulated environment in which automotive mechanic operations are carried out.
4. All inspection, operation and maintenance procedures associated with the use of tools and equipment shall comply with manufacturers' and company guidelines, instructions and reasonable flat rate time.
5. '*Specifications*' refers to any, or all of the following: manufacturers' specifications and recommendations, workplace specific requirements.
6. Regulations and legislation relevant to this unit standard include the following:
 - Labour Act, No. 6, 1992
 - Occupational Health and Safety Regulations No. 18, 1997
 - Road Traffic and Transport Regulations No. 266, 2000
 and all subsequent amendments.
7. This unit standard applies to passenger and light commercial vehicles with a Gross Vehicle Mass $\leq 5\,500$ kg (Petrol & Diesel).

Quality Assurance Requirements

This unit standard and others within this subfield may be awarded by institutions which meet the accreditation requirements set by the Namibia Qualifications Authority and the Namibia Training Authority and which comply with the national assessment and moderation requirements. Details of specific accreditation requirements and the national assessment arrangements are available from the Namibia Qualifications Authority and the Namibia Training Authority on www.nta.com.na.

Elements and Performance Criteria

Element 1: Plan and prepare for work

Range

Planning and preparation may include but are not limited to workplace inspection, equipment defect identification, assessment of conditions and hazards and determination of work requirements.

Tools and equipment may include but are not limited to tool set, special tools and equipment required performing the task, lift (hoist), wheel balancing machine, tyre fitting machine, floor stands, and tyre pressure gauge.

Materials are to include but are not limited to tyre and tube repair kit.

Performance Criteria

- 1.1 Work instructions, including repair order forms, specifications and operational details are obtained, confirmed and applied.
- 1.2 Safety requirements are followed in accordance with safety plans and policies.
- 1.3 Tools and equipment selected to carry out tasks are consistent with the requirements of the job, checked for serviceability and any faults rectified or reported prior to commencement.
- 1.4 Materials appropriate to the work application are identified, obtained, prepared, safely handled and located, ready for use.
- 1.5 Environmental protection requirements are identified and applied in line with environmental plans and regulatory obligations.

Element 2: Remove tyre from rim

Range

Inspection procedures are to include: measuring axial and lateral run out.

Performance Criteria

- 2.1 Method for tyre removal is identified in line with workplace procedures and manufacturers' specifications.

- 2.2 Removal of tyre is carried out in line with manufacturers' requirements.
- 2.3 Tyre is removed without causing damage to any components.
- 2.4 Tyre and rim are inspected in readiness for repair.
- 2.5 Tyre removal activity is carried out according to legislative, workplace and manufacturers' requirements.

Element 3: Repair tyres and tubes

Range

Tyre repairs are to include tyre puncture repair in the tread area and tube repair or replacement to be within the specifications and limits of the manufacturer and legislation.

Performance Criteria

- 3.1 Method for the repair is identified in line with workplace procedures and manufacturers' specifications.
- 3.2 Repair of tyre and tube are carried out without causing damage to any component and in line with manufacturers' requirements.

Element 4: Fit tyres and tubes

Performance Criteria

- 4.1 Method for tyre fitting is selected in accordance with workplace and manufacturers' requirements.
- 4.2 Tyre and tube are mounted onto rim.
- 4.3 Tyre and tube assembly are pressure tested in accordance with manufacturers' specifications.

Element 5: Carry out wheel balancing procedures

Range

Wheel balance is to include static and dynamic off-vehicle balancing.

Performance Criteria

- 5.1 Method for balancing wheels and tyres is identified, selected and implemented in line with workplace procedures and manufacturers' specifications.
- 5.2 Adjustments made during the balancing procedure comply with manufacturers' specifications.

Element 6: Complete work and clean up

Range

Work completion details may include, but are not limited to work schedule or appointment sheet, vehicle drop-off form, repair order form, service record book, service plan form, sign-out form for equipment.

Performance Criteria

- 6.1 Work is completed and appropriate personnel notified in accordance with workplace procedures.
- 6.2 Work area is cleared of waste, cleaned, restored and secured in accordance with workplace procedures.
- 6.3 Reusable material is collected and stored in accordance with workplace procedures.
- 6.4 Tools and equipment are cleaned, checked, maintained and stored in accordance with workplace procedures.
- 6.5 Work completion details are finalised in accordance with workplace procedures.

Registration Data

Subfield:	Automotive Engineering
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Body responsible for review:	Namibia Training Authority