

Domain	AUTOMOTIVE MECHANICS	Unit ID: 214
Title:	Carry out wheel alignment operations	
Level: 3		Credits: 2

Purpose

This unit standard specifies the competencies required to carry out wheel alignment operations. It includes conducting wheel alignment pre-checks and performing wheel alignments. This unit standard is intended for those who work 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 carrying out wheel alignment procedures according to manufacturers' specifications. This task includes correcting any two (2) maladjustments out of the following:
 - camber
 - caster
 - toe in or toe out.
3. Assessment evidence may be collected from a real workplace or a simulated real workplace or an appropriate simulated realistic environment in which automotive mechanics operations are carried out.
4. Performance of all elements in this unit standard must comply with manufacturers' specifications, workplace specific requirements and reasonable flat rate time.
5. Glossary of terms:
 - '*specifications*' refers to any, or all of the following: manufacturers' specifications and recommendations, workplace specific requirements
 - '*wheel alignment operations*' include rear-wheel drive, front-wheel drive or all-wheel drive vehicles.
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 ≤ 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. All approved unit standards, qualifications and national assessment arrangements are available on the Namibia Training Authority website www.nta.com.na.

Elements and Performance Criteria

Element 1: Plan and prepare for work

Range

Planning and preparation may include but is 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 standard tool set, tyre pressure gauge, wheel alignment equipment, lifting equipment.

Materials may include but are not limited to minor parts, and cleaning material.

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 Material requirements are identified and obtained in accordance with repair order form and/or specifications.
- 1.5 Materials are safely handled and located ready for use in line with workplace procedures.
- 1.6 Technical and/or calibration requirements for tools and equipment are sourced and implemented in line with workplace procedures.
- 1.7 Environmental protection requirements are identified and applied in line with environmental plans and regulatory obligations.

Element 2: Carry out wheel alignment pre-checks

Range

Pre-checks may include but are not limited to visual, aural and functional assessment (including damage, corrosion, measurement, wear).

Performance Criteria

- 2.1 Information is gained from customer on handling characteristics of motor vehicle in line with workplace procedures.
- 2.2 Nature and scope of work requirements are identified and confirmed in line with workplace procedures.
- 2.3 Procedures and information required for checking wheel alignment on motor vehicle are identified and sourced in line with workplace procedures.
- 2.4 Vehicle and/or equipment tests are performed to confirm need for alignment in line with workplace procedures.
- 2.5 Vehicle wheel alignment pre-checks are carried out according to workplace procedures and manufacturers' specifications.

Element 3: Perform vehicle wheel alignment

Performance Criteria

- 3.1 Information is accessed and interpreted for performing wheel alignment on motor vehicle from manufacturers' specifications.
- 3.2 Wheel alignment measuring equipment is connected to vehicle according to manufacturers' specifications.
- 3.3 Wheel alignment is completed without causing damage to any component or system in line with workplace procedures.
- 3.4 Corrective adjustments and/or repairs are carried out according to manufacturers' specifications.
- 3.5 Vehicle equipment is tested to confirm accuracy of adjustments according to manufacturers' specifications and customer requirements.

Element 4: Complete work and clean up

Range

Work completion details may include but are not limited to repair order form, sign-out form for equipment, service record book and service plan form.

Performance Criteria

- 4.1 Work is completed and appropriate personnel notified in accordance with workplace procedures.
- 4.2 Work area is cleared of waste, cleaned, restored and secured in accordance with workplace procedures.
- 4.3 Reusable material is collected and stored in accordance with workplace procedures.
- 4.4 Equipment used is cleaned, checked, maintained and stored in accordance with workplace procedures.
- 4.5 Work completion details are finalised in accordance with workplace procedures.

Registration Data

Subfield:	Automotive Engineering
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