

Domain	AUTOMOTIVE MECHANICS	Unit ID: 75
Title:	Use automotive measuring and checking tools and instruments	
Level: 2		Credits: 3

Purpose

This unit standard specifies the competencies required to use automotive measuring and checking tools and instruments. It includes the application of required maintenance and storage procedures. 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 conducting one measurement with each of the following measuring tools: micrometer, vernier calliper, inside and outside calliper, steel rule, measuring tape, angular torque gauge, radius gauge, cylinder-bore gauge, height gauge, thread pitch gauge, wire feeler gauge, straight edge, pressure gauge, vacuum gauge, feeler gauge, depth gauge, dial gauge, glass measuring cylinder, thermometer and tachometer. 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 simulated realistic 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.

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 Measurement options are determined and those most appropriate to the circumstances are selected and prepared.
- 1.5 Technical and/or calibration requirements for measuring equipment are sourced and support equipment is identified and prepared.
- 1.6 Environmental protection requirements are identified and applied in line with environmental plans and regulatory obligations.

Element 2: Conduct measurements and compare results

Range

Measurements may include and are limited to, linear measurements, angular measurements, measurements of pressure, measurements of volume, measurements of temperature and measurements of rotational speed.

Performance Criteria

- 2.1 Precision tools are used in line with manufacturers' and workplace instructions.
- 2.2 Correct and safe handling and use of measuring equipment is demonstrated.

- 2.3 Correct method for taking measurements is implemented in line with workplace procedures and manufacturers' specifications.
- 2.4 Measurement results are checked for compliance with manufacturers' specifications.
- 2.5 Measurement results, along with evidence, supporting information and recommendations are documented in line with workplace procedures.
- 2.6 Report is processed in line with workplace procedures.

Element 3: Maintain measuring equipment

Performance Criteria

- 3.1 Maintenance requirements for measuring equipment is accessed from manufacturers' specification and correctly interpreted.
- 3.2 Routine maintenance and storage of measuring equipment is carried out in accordance with manufacturer specification.
- 3.3 Checks of measuring equipment are completed without causing damage.
- 3.4 Documents are processed in accordance with workplace procedures.

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 Tools and equipment used are 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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