

Domain	RIGGING	Unit ID: 934
Title:	Use and maintain engineering measuring equipment	
Level: 2		Credits:4

Purpose

This unit standard specifies the competencies required to select, use and care for engineering measuring equipment. It includes explaining and discussing basic units of measure and symbols, selecting and using engineering measuring equipment, caring for and maintaining measuring equipment and recognising and reporting problems, changes and/or malfunctions while working. This unit standard is intended for those who work in lifting machine operations environment.

Special Notes

1. All work is performed under constant supervision and according to workplace and workshop manual specifications and occupational health and safety and environmental legislation.
2. Environment contexts under which this unit standards is used include but are not limited to:
 - Manufacturing and engineering (Metals, Plastics, Tyre and Rubber, Electrical Power Generation, Automotive Manufacturing).
 - Chemical and Petrochemical.
 - Mining.
 - Transport (Maritime, Road, Rail and Aviation).
 - Civil Engineering and Construction.
 - Food and Beverages.
 - Other engineering-related industry sectors.
3. Assessment evidence may be collected from a real workplace, or an appropriate simulated realistic environment in which lifting machine operations are carried out.
4. All inspection, operation and maintenance procedures associated with the use of tools and equipment shall comply with manufacturers' specifications, guidelines and instructions.
5. Regulations and legislation relevant to this unit standard include the following:
 - Labour Act, No. 11, 2007
 - Regulations relating to the Health and Safety of employees at work, 1997 and all subsequent amendment.

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: Explain and discuss basic units of measure and symbols

Range

Basic units of measure include length, mass, temperature, angle, pressure.

Performance Criteria

- 1.1 Basic units of measure, symbols and derived units of measure are explained and discussed.
- 1.2 Consequences of using incorrect measuring equipment are explained.
- 1.3 Measurements are taken and recorded.

Element 2: Select and use engineering measuring equipment

Range

Measuring equipment may include but are not limited to verniers, callipers, tapes, rules, combination set, spirit level, plumb bob, micrometers, dial gauges, feeler gauges, thermometers, scales, Go-Nogo gauges, thread gauges and pressure gauges.

Performance Criteria

- 2.1 Measurements are taken and appropriate to scale of measuring device.
- 2.2 Symbols are used and should be relevant to measurement.
- 2.3 Causes of damage to measuring equipment are explained.
- 2.4 Appropriate measuring equipment is selected and suitable for the measurement to be carried out.
- 2.5 Measuring equipment is used as recommended by the manufacturer to meet job or task requirements.

2.6 Problems arising are reported timeliness to appropriate personnel.

2.7 A clean and tidy work environment is maintained.

Element 3: Care for and maintain measuring equipment

Range

Damaged or faulty measuring equipment may include but are not limited to deformities, breakages, stickiness, not zeroing, missing parts, expired calibration.

Maintenance of measuring equipment may include but is not limited to oiling, setting and calibration.

Performance Criteria

3.1 Procedures and techniques for safety, storage, cleaning and maintenance are explained.

3.2 Procedures and techniques for safety, storage, cleaning and maintenance are demonstrated.

Element 4: Recognise and report problems, changes and malfunctions while working

Performance Criteria

4.1 Measuring equipment used is checked for any defaults and malfunctioning.

4.2 Unsafe or faulty measuring equipment and unsafe conditions are identified and corrective action taken.

4.3 Measuring equipment is cleaned, serviced, maintained and stored.

Registration Data

Subfield:	Lifting, Shifting and Secure loads
Date first registered:	27 September 2012
Date this version registered:	27 September 2012
Anticipated review:	2015
Body responsible for review:	Namibia Training Authority