

	<b>Unit ID: 1042</b>
<b>Domain</b>	<b>ROAD CONSTRUCTION AND MAINTENANCE – MACHINE OPERATIONS</b>
<b>Title:</b>	<b>Carry out road construction and maintenance activities using a milling machine</b>
<b>Level: 2</b>	<b>Credits: 10</b>

### Purpose

This unit standard is intended for those who work in road construction and maintenance operations. People holding credit for this unit standard are able to: Plan and prepare for work; demonstrate knowledge of the functions of a milling machine; perform maintenance and authorised service operations on the milling machine; start and shut down milling machine; operate milling machine; prepare milling machine for transport to and from site; complete work related documents; and clean up work area.

Being credited with this unit standard does not enable a person to drive the vehicle on an open, public road. In order to do so, a person must be in possession of a valid and current driving licence relevant to this vehicle type.

### Special Notes

1. Entry information:
  - Prerequisite
    - Unit 712 - *Comply with health, safety and environmental rules and regulations in road construction and maintenance work operations*
2. Quality in this unit standard means adherence to work instructions. It is assumed that the work instructions are informed by contract requirements.
3. Expected worksite production target are to be met.
4. Assessment evidence may be collected from a real workplace, a simulated workplace or an appropriately simulated environment in which road construction and maintenance operations are carried out.
5. Maintenance may include but is not limited to cleaning, authorised servicing and the monitoring, recording and reporting of faults. It may also include the conduct of authorised minor replacements and the provision of assistance to maintenance and repair activities.
6. Safe working practices include but are not limited to day-to-day observation of safety policies and procedures, and compliance with emergency procedures.
7. Performance of all elements in this unit standard must comply with all relevant legal and workplace requirements, contractual agreement and/or manufacturers' specifications.

8. Regulations and legislation relevant to this unit standard may include but are not limited to the following:
- Labour Act, No. 11 of 2007
  - Occupational Health and Safety Regulations No. 18, 1997.
  - Road Traffic and Transport Regulations No. 52, 1999 and Government Notice No 53 Road Traffic and Transport Regulations
  - Road Ordinance 1972 and other relevant legislations and all subsequent amendments.

### **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](http://www.nta.com.na).

## **Elements and Performance Criteria**

### **Element 1: Plan and prepare for work**

#### **Performance Criteria**

- 1.1 Work instructions, including plans, specifications, quality requirements and operational details are obtained, explained, clarified and applied to the allocated task.
- 1.2 Safety requirements, including personal protective clothing and equipment are obtained from the site safety plan, workplace policies and procedures, and applied to the allocated task.
- 1.3 Traffic control requirements are obtained and implemented according to workplace requirements.
- 1.4 Plant, tools, fuel, lubricants, equipment, attachments and accessories selected to carry out tasks are checked for consistency with the requirements of the job, their usability and any faults rectified or reported prior to commencement of work.
- 1.5 Environmental protection requirements are identified from the project environmental management plan and applied to the allocated task.
- 1.6 Work area is inspected and prepared according to workplace procedures.

## **Element 2: Demonstrate knowledge of the functions of a milling machine**

### **Range**

Major components may include but are not limited to engine; fuel system; hydraulic system; electrical system; braking system; transmission; cooling system; stability; and suitability.

### **Performance Criteria**

- 2.1 The main functions of milling machines are described in terms of manufacturer's specifications.
- 2.2 The operation of all major components is described in terms of their functions.
- 2.3 Safety features and warning devices on the milling machine are identified, and their purpose explained in accordance with manufacturer's specifications.
- 2.4 The maximum operating capacities are explained in terms of the designed milling machine capabilities.

## **Element 3: Perform maintenance and authorised service operations on the milling machine**

### **Performance Criteria**

- 3.1 Milling machine is maintained and serviced in accordance with the workplace requirements and manufacturer's procedures.

## **Element 4: Start and shut down milling machine**

### **Performance Criteria**

- 4.1 Pre-operational checks are carried out according to manufacturer's specifications and workplace procedures.
- 4.2 Start-up and shut-down procedures are followed according to manufacturer's specifications.
- 4.3 Milling machine plant hours are recorded, if required, in accordance with workplace requirements.
- 4.4 Milling machine plant maintenance and faults are reported in accordance with workplace requirements.

## **Element 5: Operate milling machine**

### **Performance Criteria**

- 5.1 Relevant work instructions are obtained and confirmed in line with workplace procedures.
- 5.2 Functions of the various controls is demonstrated in accordance with manufacturer's specifications.

- 5.3 Controls are used to effectively remove the existing road surface according to job requirements and manufacturer's specifications.
- 5.4 Milling machine performance is monitored and corrective action is taken when necessary, in accordance with manufacturer's specifications.

**Element 6: Prepare milling machine for transport to and from site**

**Performance criteria**

- 6.1 Methods of loading a milling machine for transport are demonstrated according to safety requirements, manufacturer's specifications and transport configuration.
- 6.2 Methods for securing a milling machine for transport are demonstrated in relation to lashing points and safety requirements.

**Element 7: Complete work related documents**

**Performance Criteria**

- 7.1 Work related documents are completed in accordance with contract and workplace requirements.
- 7.2 Maintenance and service related documents are completed in accordance with manufacturer and workplace requirements.
- 7.3 Documents related to accidents or other incidents are completed in accordance with workplace requirements.

**Element 8: Clean up work area**

**Performance Criteria**

- 8.1 Work area is cleared and materials disposed of or recycled in accordance with project environment management plan.
- 8.2 Milling machine, tools and equipments are cleaned, checked, maintained, serviced and stored in accordance with manufacturers' recommendations and standard work practices.

**Registration Data**

<b>Subfield:</b>	Road Construction and Maintenance
<b>Date first registered:</b>	
<b>Date this version registered:</b>	
<b>Anticipated review:</b>	
<b>Body responsible for review:</b>	Namibia Training Authority