

	Unit ID: 1029
Domain	ROAD CONSTRUCTION AND MAINTENANCE – MACHINE OPERATIONS
Title:	Carry out road construction and maintenance activities using a chip- spreader
Level: 3	Credits: 15

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 chip-spreaders; perform maintenance and authorised service operations on a chip-spreader; start and shut down a chip-spreader; operate chip-spreader; prepare self-propelled chip-spreader 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. 'Chip-spreader' refers to truck mounted and self-propelled chip-spreader types.
6. 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.
7. Safe working practices include but are not limited to day-to-day observation of safety policies and procedures, and compliance with emergency procedures.
8. Performance of all elements in this unit standard must comply with all relevant legal and workplace requirements, contractual agreement and/or manufacturers' specifications.

9. 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.

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 Machine, 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 chip-spreaders

Range

Safety aspects may include but are not limited to observation of vehicle body height to maintain clearance from obstructions; procedures for clearing spreader blockage; and consequences of moving behind a reversing truck out of sight of the driver.

Performance Criteria

- 2.1 Chip-spreaders are described in terms of their components and functions.
- 2.2 Chip-flow control on spreaders is described in terms of truck speed, hoist height, roller speed, and feeder gate settings.
- 2.3 Safety aspects of operating a chip spreader are described.

Element 3: Perform maintenance and authorised service operations on a chip-spreader

Range

Periodic maintenance may include but is not limited to uniformity of gate opening; function of cut-off plates or width control; roller condition; control and function of drive system.

Performance Criteria

- 3.1 Prior to use the chip-spreader is checked for calibration settings and minor adjustments are made if necessary according to manufacturer's specifications.
- 3.2 Chip-spreader is maintained and serviced periodically in accordance with the workplace requirements and manufacturer's procedures.

Element 4: Start and shut down a chip-spreader

Performance Criteria

- 4.1 Pre-operational checks are carried out according to appropriate checklist and workplace procedures.
- 4.2 Daily and weekly operator maintenance is performed according to appropriate checklist and workplace procedures.
- 4.3 Start-up and shutdown procedures are followed according to manufacturer's specifications.
- 4.4 Operating hours are recorded, if required, in accordance with workplace requirements.
- 4.5 Chip-spreader maintenance and faults are reported in accordance with workplace requirements.

Element 5: Operate chip-spreader

Performance Criteria

- 5.1 Relevant work instructions are obtained and confirmed in line with workplace procedures.

- 5.2 Communication with truck driver is established and maintained during the chip spreading process in line with workplace procedures.
- 5.3 The gate adjustment, hoist angle, peripheral speed of roller, speed of truck and width of spread are adjusted where necessary to maintain the specified chip coverage rate and required width of spread according to workplace procedures and job requirements.
- 5.4 The chip application rate is verified in accordance with contract specifications.
- 5.5 The start and stop locations comply with work pattern requirements.
- 5.6 Chip spreader performance is monitored and corrective action is taken, if necessary, in accordance with manufacturer's specifications.

Element 6: Prepare self-propelled chip-spreader for transport to and from site

Performance criteria

- 6.1 Methods of loading a chip-spreader for transport are demonstrated according to safety requirements, manufacturer's specifications and transport configuration.
- 6.2 Methods for securing a chip-spreader 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 Machine, tools and equipments are cleaned, checked, maintained, serviced and stored in accordance with manufacturers' recommendations and standard work practices.
- 8.3 Unused materials are safely stored and stacked for future use.

Registration Data

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