

<b>Domain</b>	<b>ROAD CONSTRUCTION AND MAINTENANCE - BLADING</b>	<b>Unit ID: 722</b>
<b>Unit Title:</b>	<b>Blade gravel roads in road construction and maintenance</b>	
<b>Level: 3</b>		<b>Credits: 25</b>

### **Purpose**

This unit standard is intended for those who work in road construction and maintenance performing blading operations on gravel roads. People holding credit for this unit standard are able to: Plan and prepare for work, fulfil legal requirements and workplace procedures prior to and during grader operations, perform maintenance and authorised service operations on the grader, blade road surfaces, cut drainage channels, Maintain road reserves, complete work related documents and clean up work area.

### **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. Assessment evidence may be collected from a real workplace or a simulated real workplace in which grader operations are carried out.
3. Equipment, tools, grader attachments, fuel and lubricants include but not limited to graders, tyres, grader blades, machine guidance system, caravan, trailer, levelling equipment, ripper, diesel and specified oil and lubricants and accessory tools.
4. Soils in this unit standard may include but are not limited to clays, silts, stones, gravel, sand and topsoil.
5. Performed maintenance is to include 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 are to include day to day observation of safety policies and procedures and compliance with workplace 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 include the following:
  - Labour Act, No. 11 of 2007 as amended
  - 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.

### **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, and applied to the allocated task.
- 1.2 Safety requirements are obtained from the site safety plan and workplace policies and procedures, and applied to the allocated task.
- 1.3 Signage requirements are obtained from the project traffic management plan and uplifted.
- 1.4 Plant, tools, fuel and lubricants, and equipment, attachments and accessories selected to carry out tasks are consistent with the requirements of the job, checked for 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.

#### **Element 2: Fulfil legal requirements and workplace procedures prior to and during grader operations.**

##### **Performance Criteria**

- 2.1 Valid, relevant licences are carried at all times.
- 2.2 Signs are placed in accordance with worksite and regulatory road safety and traffic management requirements.
- 2.3 The functioning of the flashing light on the grader is verified during travelling and operation is checked.
- 2.4 Environmental obligations are fulfilled.

- 2.5 Damage to grid gates, bridges, road signs and other road furniture are reported in accordance with worksite procedures and contractual requirement.
- 2.6 Wash-aways are secured with warning signs, repaired, reported, and repairs are reported in accordance with worksite procedures.

**Element 3: Perform maintenance and authorised service operations on the grader.**

**Performance Criteria**

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

**Element 4: Blade road surfaces.**

**Performance Criteria**

- 4.1 Blading of the gravel road surface is executed according to instructions, contractual requirements and set standards.
- 4.2 Blading is within 200mm either side of the bridge and ensure smooth surface where the gravel road meets the bridge approach.
- 4.3 The approach to any bridge is cleared in accordance with worksite procedures.
- 4.4 Grid gates are cleared at the entrance to farm roads in accordance with worksite procedures. Blading is within 200mm either side of the grid gate.
- 4.5 No excess loss material is left as windrow in the gate entrance of approach.
- 4.6 No windrow is left at concrete or gravel drifts.

**Element 5: Cut drainage channels.**

**Performance Criteria**

- 5.1 Drainage and channels are cut according to instructions and workplace requirements.
- 5.2 The angle of the drain furrow and the drain wall matches the expected volume of the run-off water.
- 5.3 Checks are made to ensure that the drainage channels will carry away from the road surface.
- 5.4 The stability of the road area where the road surface and drain meet is maintained.

## **Element 6: Maintain road reserves.**

### **Performance criteria**

- 6.1 The blading of road reserves complies with work instructions.
- 6.2 The blading of road reserve does not damage the existing drainage structures.

## **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 document 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 Plant, 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, stacked for future use and recorded in accordance with workplace procedures.

## **Registration Data**

<b>Subfield:</b>	Road Construction and Maintenance
<b>Date first registered:</b>	12 November 2009
<b>Date this version registered:</b>	12 November 2009
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<b>Body responsible for review:</b>	Namibia Training Authority