Title | Operate a motor grader for road maintenance
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Level | 3 | Credits | 30

**Purpose**
People credited with this unit standard are able to: prepare for road maintenance operations; manoeuvre and control grader on site; use grader attachments; use grader for road maintenance; and move grader from site to site.

**Classification**
Infrastructure Works > Civil Plant Operation

**Available grade**
Achieved

**Prerequisites**
Class of driver licence required for the vehicle being driven.

**Guidance Information**


2. Assessment against this unit standard must take place in a workplace environment. Assessment parameters will depend on company and site specific equipment, procedures, and practices. Practices must reflect industry best practice and comply with legislative requirements.


4. Definitions

*Company requirements* include the policy, procedures, and methodologies of the company. They include legislative and regulatory requirements applicable to the company or a specific site. Requirements are documented in the company’s health and safety plans, traffic management plans, contract work programmes, quality assurance programmes, policies, and procedural documents.

*Contract specifications* include plans, diagrams, and special technical conditions. They do not include special administrative conditions.

*Manufacturer’s instructions* may include specifications, installation, handling, use and maintenance instructions, and safety data sheets.

*Job instructions* are those given to the operator prior to undertaking a job. They may include site safety instructions, contract drawings, and written memos.
Walk round means to walk around the machine inspecting it and its environment for hazards and removing hazards that may impair start-up.

Outcomes and performance criteria

Outcome 1

Prepare for road maintenance operations.

Performance criteria

1.1 Job instructions are confirmed in accordance with contract specifications and company requirements.

1.2 Walk round is completed prior to starting work in accordance with job instructions.

1.3 Machine operation is checked prior to starting work in accordance with manufacturer’s instructions.

Range visibility, seat belt, engine controls and gauges, throttle position, hydraulic controls; check controls and gauges after warm-up.

1.4 Site and machine are checked for hazards in accordance with Health and Safety in Employment Regulations 1995 and company requirements.

1.5 Mould board and cutting edges are checked for wear in accordance with company requirements.

1.6 Site is checked for areas of special treatment and corrections are planned in accordance with company requirements.

Range may include – soft spots, cambers.

Outcome 2

Manoeuvre and control grader on site.

Performance criteria

2.1 Grader is manoeuvred on site with adequate clearances and in accordance with Operator Safety Manual for Earthmoving Machinery and job instructions.

Range working clearances include but are not limited to – overhead wires, underground services, proximity of people and plant, trenching works.
2.2 Grader controls are used to produce controlled flow of material

Range forward movement, reversing, wheel lean, differential lock, articulation.

2.3 Sequence and work methods are chosen to ensure safety of people and plant.

Range production requirements, road traffic.

Outcome 3

Use grader attachments.

Performance criteria

3.1 Blade is used to cut existing surface in accordance with contract specifications.

3.2 Attachment is fitted and used in accordance with contract specifications and manufacturer’s instructions.

Range one of – scarifier, snowplough, bullet tips, bull blade, windrow eliminator.

Outcome 4

Use grader for road maintenance.

Performance criteria

4.1 Roadside drainage is maintained and repaired in accordance with contract specifications.

Range clearing and shaping water table, forming cut-out, clearing entrance culvert, clearing and forming inlet and outlet of shallow culvert.

4.2 Road surfacing faults are repaired to levels and cross-falls specified in contract specifications.

Range potholes, corrugations, shape loss, scour, ravelling, rutting, heave, aggregate loss, cracking, slippery surfaces, soft surfaces on unsealed roads; gravel shoulders, grass shoulders on sealed or unsealed roads.

4.3 Road features are maintained and repaired in accordance with contract specifications.

Range intersection, cross-fall, super-elevation, bridge ends, rail crossing, shoulder.

4.4 Running course is distributed on road in accordance with contract specifications.
4.5 New and old aggregates are mixed and spread in accordance with contract specifications.

**Outcome 5**

Move grader from site to site.

**Performance criteria**

5.1 Grader is moved from site to site in accordance with Traffic Regulations 1976.

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**Replacement information**

This unit standard, unit standard 17311 and, unit standard 17313 were replaced by unit standard 31455.

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This unit standard is expiring. Assessment against the standard must take place by the last date for assessment set out below.

**Status information and last date for assessment for superseded versions**

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**Consent and Moderation Requirements (CMR) reference**

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