

Title	Operate a motor grader safely for surface work at an extractive site		
Level	3	Credits	10

Purpose	<p>This unit standard is for people operating motor graders for surface work at an extractive site.</p> <p>People credited with this unit standard are able to, for surface work at an extractive site: describe safe work practices, environmental issues, and emergency procedures for operating a motor grader; and operate and control a motor grader.</p>
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Classification	Extractive Industries > Surface Extraction
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Available grade	Achieved
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Prerequisites	Unit 8922, <i>Conduct safety checks before and after equipment use at an extractive site</i> , or demonstrate equivalent knowledge and skills.
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Guidance Information

- Performance of the outcomes of this unit standard must comply with the following:
 - Resource Management Act 1991;
 - Health and Safety at Work Act 2015 (HSW);
 - Health and Safety at Work (General Risk and Workplace Management) Regulations 2016;
 - Health and Safety at Work (Worker Engagement, Participation, and Representation) Regulations 2016;
 - Health and Safety at Work (Mining Operations and Quarrying Operations) Regulations 2016;
 - approved codes of practice issued pursuant to the HSW Act.
- Any new, amended or replacement Acts, regulations, standards, codes of practice, guidelines, or authority requirements or conditions affecting this unit standard will take precedence for assessment purposes, pending review of this unit standard.
- Definitions

Company procedures mean the documented methods for performing work activities and include health and safety, operational, environmental, and quality management requirements. They may refer to legislation, regulations, guidelines, standard operating procedures, manuals, codes of practice, or policy statements.

Dry means the surface is dry to touch and no rain falls during the task.

Industry best practice may be documented in management plans, control plans, company procedures, managers' rules, occupational health and safety policy, industry guidelines, codes of practice, manufacturers' instructions, and safe working and/or job procedures (or equivalent).

Job instructions are those given to the operator before undertaking a job. They may include site safety instructions, contract drawings, and written memos.

Wet means it has been raining for more than one hour before starting and is still raining during and on completion of the task.

- 4 Personal protective equipment must be used throughout operations in accordance with industry best practice and/or company procedures.
- 5 Assessment against this unit standard must be based on evidence from an extractives industry site.
- 6 It is recommended that people seeking credit for this unit standard first hold credit for Unit 16701, *Demonstrate knowledge and skills for driving on a road for endorsement W (wheels)*, or demonstrate equivalent knowledge and skills; and class of driver licence required for the vehicle being driven.

Outcomes and performance criteria

Outcome 1

Describe safe work practices, environmental issues, and emergency procedures for operating a motor grader at an extractive site.

Performance criteria

- 1.1 Safe work practices for motor grader operation are described in accordance with industry best practice and/or company procedures.

Range	includes but is not limited to – vehicle interactions, pedestrians, edge protection, overhead lines.
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- 1.2 Emergency procedures for operating a motor grader are described in accordance with industry best practice and/or company procedures.

Range	operation and maintenance manuals (safety section), warning systems, isolating systems, extinguishers, site safety plan; may include – two-way radio procedures.
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- 1.3 Environmental issues related to the work site are described in terms of impact of motor grader operations.
- 1.4 The methods for controlling and monitoring adverse effects on the environment during motor grader operations are described in accordance with legislative requirements, industry best practice, and/or company procedures.

Outcome 2

Operate and control a motor grader for surface work at an extractive site.

Performance criteria

- 2.1 Pre-start checks are carried out in accordance with industry best practice, company procedures, and/or manufacturer's instructions.
- Range includes – walk-around inspection, fuel, lubricants, water levels, hydraulic fluid level;
may include but is not limited to – cleanliness of windows, battery isolated, machine not tagged out, seatbelt.
- 2.2 The motor grader is mounted and dismounted in accordance with the principle of three points of contact.
- 2.3 Post-start checks are carried out in accordance with industry best practice, company procedures, and/or manufacturer's instructions.
- Range includes but is not limited to – warning systems, brakes, steering, lights, leaks, gauges, operating controls.
- 2.4 Identified health and safety hazards are controlled and monitored in accordance with legislative requirements and company procedures.
- 2.5 The motor grader is operated on site with adequate clearances in accordance with job instructions and industry best practice.
- Range clearances may include but are not limited to – underground services, proximity of people and plant, survey pegs, setting.
- 2.6 Motor grader controls are used to produce controlled flow of material.
- Range forward movement, wheel lean, differential lock;
may include but is not limited to – articulation.
- 2.7 The motor grader is controlled on different ground and weather conditions in accordance with industry best practice, company procedures, and/or manufacturer's instructions.
- Range may include but is not limited to – slopes, soft ground, slippery ground, wet or dry conditions, day or night shift.
- 2.8 Sequence and work methods are chosen to ensure safety of people and plant in accordance with company procedures.
- Range production requirements, site traffic.
- 2.9 Materials are graded in accordance with job instructions.

- 2.10 Formation levels are shaped in accordance with job instructions.
- Range cross-fall, grade;
may include – super elevation.
- 2.11 Drainage channels are maintained in accordance with job instructions, and industry best practice and/or company procedures.
- 2.12 Materials are spread and levelled in accordance with job instructions.
- 2.13 Motor grader is parked, shut down, and maintained in accordance with industry best practice, company procedures, and/or manufacturer's instructions.
- 2.14 Documentation is completed in accordance with company procedures.

Planned review date	31 December 2022
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Status information and last date for assessment for superseded versions

Process	Version	Date	Last Date for Assessment
Registration	1	15 April 2011	31 December 2017
Review	2	18 June 2015	N/A
Rollover and Revision	3	25 January 2018	N/A

Consent and Moderation Requirements (CMR) reference	0114
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This CMR can be accessed at <http://www.nzqa.govt.nz/framework/search/index.do>.

Comments on this unit standard

Please contact MITO New Zealand Incorporated info@mito.org.nz if you wish to suggest changes to the content of this unit standard.