

Title	Operate a motor grader on infrastructure worksites		
Level	3	Credits	20

Purpose	People credited with this unit standard are able to: describe motor graders; prepare for motor grader operations; manoeuvre and control a motor grader on site; carry out work operations using a motor grader; and complete post-operational procedures for a motor grader.
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Classification	Infrastructure Works > Civil Plant Operation
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Available grade	Achieved
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Prerequisites	Class of driver licence and any driver licence endorsement appropriate for the vehicle being driven.
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Guidance Information

- 1 Evidence presented for assessment against this unit standard must be consistent with safe working practices and be in accordance with relevant legislative and industry requirements.
- 2 Legislation relevant to this unit standard includes – Health and Safety at Work Act 2015, and all subsequent amendments.
- 3 Definition
Industry requirements refer to relevant policies, processes, methodologies, industry codes of practice, site specific health and safety plans, standard operating procedures, site safety plans, quality plans, work plans, traffic management plans, contract work programmes, job safety analysis, safe work method statements, job instructions, manufacturer's requirements, contract specifications, manuals, procedural documents. Waka Kotahi New Zealand Transport Agency specifications and guidelines.

Outcomes and performance criteria

Outcome 1

Describe motor graders.

Performance criteria

- 1.1 Motor graders and their attachments and controls are described in terms of purpose and function, and correct operation.

- 1.2 Types and weights of motor grader are described in terms of their capabilities and limitations, and suitability for specific infrastructure works tasks.
- 1.3 Motor graders are described in terms of their safety features and requirements for safe use.

Outcome 2

Prepare for motor grader operations.

Performance criteria

- 2.1 Job instructions are confirmed.
- 2.2 Pre-start check of machine and 360 walkaround are carried out prior to starting work and any required actions are taken.

Range machine operation, damage, wear, and tear, cutting edges.
- 2.3 A risk assessment of site and machine is carried out, and any identified hazards are eliminated or minimised.
- 2.4 Site communication protocols are confirmed.

Outcome 3

Manoeuvre and control motor grader on site.

Performance criteria

- 3.1 Motor grader is manoeuvred on site with adequate clearances in accordance with job instructions.
- 3.2 Motor grader is controlled on slopes.
- 3.3 Motor grader controls are used to produce controlled flow of material.

Range controls include – forward movement, reversing, wheel lean, differential lock.
- 3.4 Motor grader is controlled in wet site conditions.
- 3.5 Structures and road furniture are preserved when manoeuvring motor grader.
- 3.6 Machine production is maintained at maximum usage relative to the task and the safety of the operator and machine.
- 3.7 Cooperation of motor grader operator with operators of other plant on the worksite took place.

Outcome 4

Carry out work operations using a motor grader.

Range work operations include – road construction, road maintenance, or earthworks.

Performance criteria

- 4.1 Surface is cut in accordance with job instructions.
- 4.2 Materials are spread and levelled in accordance with job instructions.

Range materials include – soil, sand, coarse aggregate, graded aggregate, stabilised material, hot mix, cold mix; evidence of three materials is required.
- 4.3 Surface is shaped in accordance with job instructions.
- 4.4 Surface is trimmed to line and level in accordance with job instructions.
- 4.5 Formation or repair of drainage channels is carried out in accordance with job instructions.
- 4.6 A scarifier or ripper is adjusted and used in accordance with job instructions.
- 4.7 Motor grader is moved from site to site.

Outcome 5

Complete post-operational procedures for a motor grader.

Performance criteria

- 5.1 Motor grader is parked, shut down safely and secured, and daily maintenance is carried out.
- 5.2 Motor grader is inspected, and any faults are reported.

Replacement information	This unit standard replaced unit standard 17311, unit standard 17312, and unit standard 17313.
Planned review date	31 December 2026

Status information and last date for assessment for superseded versions

Process	Version	Date	Last Date for Assessment
Registration	1	27 September 2018	31 December 2023
Review	2	30 September 2021	N/A

Consent and Moderation Requirements (CMR) reference

0101

This CMR can be accessed at <http://www.nzqa.govt.nz/framework/search/index.do>.

Comments on this unit standard

Please contact Connexis - Infrastructure Industry Training Organisation qualifications@connexis.org.nz if you wish to suggest changes to the content of this unit standard.