

Title	Operate a hydraulic excavator on infrastructure worksites		
Level	3	Credits	20

Purpose	People credited with this unit standard are able to: describe hydraulic excavators; prepare for on-site operations; manoeuvre and control a hydraulic excavator on site; load and place materials into a vehicle; excavate, strip, and trim materials; construct a stockpile; and complete post-operational procedures for a hydraulic excavator.
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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 and replacements.
- 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 and Waka Kotahi New Zealand Transport Agency specifications and guidelines.

Outcomes and performance criteria

Outcome 1

Describe hydraulic excavators.

Performance criteria

- 1.1 Hydraulic excavators and their attachments and controls are described in terms of purpose and function, and correct operation.
- 1.2 Types and weights of hydraulic excavator are described in terms of their capabilities and limitations, and suitability for specific infrastructure works tasks.
- 1.3 Hydraulic excavators are described in terms of their safety features and requirements for safe use.

Outcome 2

Prepare for on-site operations.

Performance criteria

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

Range machine operation, damage, wear and tear, track adjustment.
- 2.3 A risk assessment of the 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 a hydraulic excavator on site.

Performance criteria

- 3.1 Excavator is manoeuvred on site with adequate clearances.
- 3.2 Machine control levers are used to produce smooth movement of bucket through all positions.
- 3.3 Excavator is controlled on a level worksite.
- 3.4 Excavator is controlled in wet conditions.
- 3.5 Machine production is maintained at maximum usage relative to the task and the safety of the operator.

Range lead times, placement of vehicle being loaded.
- 3.6 Structures are preserved when manoeuvring excavator.

- 3.7 Materials are carried in safe load position and with operator showing awareness of the operating environment, including when reversing.
- 3.8 Machine is operated safely during site operations.

Outcome 4

Load and place materials into a vehicle.

Performance criteria

- 4.1 Communication is maintained with load vehicle driver during positioning of load vehicle.
- 4.2 Excavator is positioned strategically, and material is placed in load vehicle.
- 4.3 Materials are placed with minimal spillage.

Outcome 5

Excavate, strip, and trim materials.

Performance criteria

- 5.1 A suitable work platform is created prior to starting work.
- 5.2 Topsoil is stripped to contour and depth.
- 5.3 Area for specified job is excavated to depth and level.

Outcome 6

Construct a stockpile.

Performance criteria

- 6.1 Stockpile is formed.
- Range soil, aggregates, rock.

Outcome 7

Complete post-operational procedures for a hydraulic excavator.

Performance criteria

- 7.1 Hydraulic excavator is parked, shut down safely and secured, and daily maintenance is carried out.
- 7.2 Hydraulic excavator is inspected, and any faults are reported.

Planned review date	31 December 2026
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Status information and last date for assessment for superseded versions

Process	Version	Date	Last Date for Assessment
Registration	1	30 May 2000	31 December 2014
Review	2	25 September 2006	31 December 2016
Review	3	19 February 2015	31 December 2021
Review	4	27 September 2018	31 December 2023
Review	5	30 September 2021	N/A

Consent and Moderation Requirements (CMR) reference	0101
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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 Connexis - Infrastructure Industry Training Organisation qualifications@connexis.org.nz if you wish to suggest changes to the content of this unit standard.