

Title	Prepare and operate plant and confirm post operational procedures		
Level	3	Credits	20

Purpose	People credited with this unit standard are able to: <ul style="list-style-type: none"> – demonstrate knowledge of plant and its operation; – prepare for plant operation; – operate plant; and – confirm post operational procedures.
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Classification	Infrastructure Works > Structural Foundations
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Available grade	Achieved
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Prerequisites	Class of driver licence required for the vehicle being driven.
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Guidance Information

- Learning and assessment within this unit standard must be carried out in a construction or infrastructure works environment in accordance with industry requirements and the following legislation, as relevant to the role, and any subsequent amendments:
 - Health and Safety at Work Act 2015;
 - Resource Management Act 1991;
 - Heritage New Zealand Pouhere Taonga Act 2014;
 - Hazardous Substances and New Organisms Act 1996;
 - Traffic Regulations 1976;
 - Land Transport Rule: Vehicle Dimensions and Mass 2016;
 - Land Transport Rule: Heavy Vehicles 2004;
 - *Excavation Safety: Good Practice Guidelines 2016*, available from Worksafe, www.worksafe.govt.nz;
 - *Operator Safety Manual for Earthmoving Machinery 2017*, available from Civil Contractors New Zealand <https://civilcontractors.co.nz/>.

2 Definitions

Industry requirements may refer to but are not limited 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.

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

Prestart checks include but are not limited to damage, cracks, visual defects, leaks, fluid levels, wear, faults, safety and maintenance checks, or any assessment or critical checks for ensuring safe plant operation.

Walk round refers to walking around the machine, inspecting it and its environment for hazards, and removing hazards that may impair start-up.

- 3 For the purpose of assessment, *plant* refers to wheeled loader, hydraulic excavator, motor grader, motor scraper, self-propelled roller, bulldozer, articulated dump truck, road mill or reclaimer stabiliser, rigid dump truck, telehandler.
Evidence of one piece of plant is required.

Outcomes and performance criteria

Outcome 1

Demonstrate knowledge of plant and its operation.

Performance criteria

- 1.1 Benefits of plant are explained in accordance with the plant machine specifications.
- Range purpose, function, serviceability, safety, flexibility of use, attachments, durability.
- 1.2 Capabilities of the plant are explained in terms of the relevant job specifications, technological features and providing solutions for onsite works.
- 1.3 Sustainability features are explained in terms of environmental benefits, reducing costs, and analysing equipment and job site data to maximise productivity.

Outcome 2

Prepare for plant operation.

Performance criteria

- 2.1 Walk round is completed prior to starting work.
- 2.2 Prestart checks are completed, problems are identified, corrective action is taken, in accordance with manufacturer instructions and operator manual.
- 2.3 Exclusion zones and any services are clarified and confirmed.
- 2.4 Task analysis and assessment of operating conditions are completed and any adjustments to plant operation or attachments are actioned.
- 2.5 Operator skills and good practice behaviours, relevant for daily work operations, are identified in accordance with the operator manual.

- 2.6 Personal protective equipment specific to the plant and job specifications is selected.

Outcome 3

Operate plant.

Performance criteria

- 3.1 Plant operating controls are used safely and productively through all positions in accordance with the operator manual.
- 3.2 Plant is manoeuvred, positioned, and controlled on site.
- Range adequate clearances, working around services, changing fittings appropriately, smoothness of movement and machine stability.
- 3.3 Plant operations meet the requirements of job specifications and within the design capability of the machine.
- 3.4 Plant is controlled in different site conditions, surfaces, and terrain, in accordance with the job specifications and operator safety manual.
- 3.5 Site markers and permanent fixtures and property are preserved.
- 3.6 Machine production quantities are maintained relative to the task and the safety of the operator, in accordance with the operator manual and the manufacturer instructions.
- 3.7 Communication, hand signals and protocols are maintained with spotters, other operators, and site personnel in accordance with accepted industry practice.
- 3.8 Sequence of work is followed, and work methods are selected to meet job requirements in the allotted time.

Outcome 4

Confirm post operational procedures.

Performance criteria

- 4.1 Procedures for refuelling, storage, maintaining attachments and repairing damage or faults are confirmed in accordance with the operator manual.
- 4.2 Routine maintenance procedures are confirmed.
- Range changing oil, testing the battery cables and terminals, air filter, brake fluid, tyres, and air pressure.
- 4.3 Results of the maintenance and safety checks are documented and reported to the relevant personnel.

- 4.4 Shut down procedures and checks are confirmed in accordance with manufacturer instructions.
- 4.5 Hazardous items, equipment and lock out tags are identified and communicated to the relevant personnel.
- 4.6 Improvements in operating procedures are identified and reported.

Planned review date	31 December 2028
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Status information and last date for assessment for superseded versions

Process	Version	Date	Last Date for Assessment
Registration	1	14 December 2017	31 December 2026
Revision	2	30 August 2018	31 December 2026
Rollover	3	29 September 2022	31 December 2026
Review	4	27 July 2023	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 Waihangā Ara Rau Construction and Infrastructure Workforce Development Council at qualifications@WaihangāAraRau.nz if you wish to suggest changes to the content of this unit standard.