

Title	Demonstrate knowledge of and operate low-pressure water blaster for blaster coating operations		
Level	3	Credits	4

Purpose	People credited with this unit standard are able to: demonstrate knowledge of low-pressure water blasters; prepare for low-pressure water blasting; operate a low-pressure water blaster for blaster coating operations; and maintain and store low-pressure water blasting equipment.
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Classification	Manufacturing Skills > Manufacturing Processes
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Available grade	Achieved
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Prerequisites	Unit 17547, <i>Demonstrate knowledge of health and safety for blaster coating operations</i> , or demonstrate equivalent knowledge and skills.
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Guidance Information

- 1 Legislation relevant to this unit standard includes but is not limited to the: Health and Safety at Work Act 2015 and supporting regulations.
- 2 References
SSPC-SP 12/NACE No. 5, *Surface Preparation and Cleaning of Metals by Waterjetting Prior to Recoating*, Steel Structures Painting Council, available at <http://www.sspc.org/>.
- 3 Definitions
Accepted industry practice refers to codes of practice and standardised procedures accepted by the wider industry as examples of best practice.
Job requirements refer to specific requirements for the job at hand. These requirements may or may not be covered in the job documentation and may include special instructions, quality requirements expected by the customer, and/or production standards as set down by the workplace.
Low-pressure water blasting is the use of water pressure less than 5000 psi (34MPa) for cleaning.
Workplace procedures refer to the procedures used by the organisation carrying out the work and applicable to the tasks being carried out. Examples are – standard operating procedures, safety procedures, equipment operating procedures, codes of practice, quality management practices and standards, and procedures to comply with legislative and local body requirements.

4 Assessment information

All activities and evidence in outcomes 2, 3, and 4 must comply with applicable workplace procedures and must be consistent with accepted industry practice.

Outcomes and performance criteria

Outcome 1

Demonstrate knowledge of low-pressure water blasters.

Performance criteria

- 1.1 Low-pressure water blasters are described in terms of their classification.
- 1.2 Components of a low-pressure water blaster are identified.
- 1.3 Low-pressure water blasters and their components are described in terms of their functions.
- 1.4 Safety precautions for low-pressure water blasters are described in terms of the events that cause the immediate cessation of water blasting operations.
- 1.5 Safety precautions for low-pressure water blasters are described in terms of events that cause the depressurisation of the water blasting system.

Outcome 2

Prepare for low-pressure water blasting.

Performance criteria

- 2.1 Work area is clearly defined with the perimeter outside the effective range of the blasting equipment.
- 2.2 Warning signs are erected.
- 2.3 Location of emergency first aid kit is verified.
- 2.4 Personal protective equipment for the job is fitted and worn in accordance with manufacturers' instructions.

Range includes but is not limited to – non-slip boots, waterproof clothing, gloves, eye protection.
- 2.5 Equipment in close proximity to blasting operations is removed or protected from debris and ingress of water from the operations.
- 2.6 Live electricity is eliminated from the site prior to commencing operations.
- 2.7 Pre-operational checks are made and recorded in accordance with manufacturer's instructions.

Range includes but is not limited to checking – full water tank, no interference with the release mechanism that will prevent immediate depressurisation of the blasting equipment, hoses not snagged or damaged.

- 2.8 System is flushed with sufficient water to remove contaminants before nozzle is initialised in accordance with manufacturer's instructions.
- 2.9 Hoses are arranged to minimise any tripping hazard.
- 2.10 Persons not directly involved in blasting operations are excluded from the area.
- 2.11 Cleaning agents are mixed, where required, and applied to substrate prior to water blasting in accordance with manufacturer's instructions and job requirements.

Outcome 3

Operate a low-pressure water blaster for blaster coating operations.

Performance criteria

- 3.1 Job instructions are confirmed with supervisor.
- Range blasting pressure, surface, process.
- 3.2 Water pressure is set and checked in accordance with manufacturer's instructions.
- 3.3 A low-pressure water blaster is operated on different surfaces requiring the adjustment of water pressure to suit the surface being cleaned in accordance with job requirements.
- Range three of – concrete, timber, carbon steel, zinc, galvanised surface, aluminium, stainless steel, plastic, other.
- 3.4 Surface contaminants are removed in accordance with job requirements.
- 3.5 An attachment is fitted and used in accordance with manufacturer's instructions.
- 3.6 Single-person blasting operation is carried out.
- Range includes but is not limited to – isolation from pressurised water flow, avoidance of occupational health and safety risks (barrier off areas).
- 3.7 Participation in multiple-person blasting operation is carried out.
- Range includes but is not limited to – observer, additional operator, code of signals, rotation of duties.

Outcome 4

Maintain and store low-pressure water blasting equipment.

Performance criteria

4.1 Maintenance checks are made on low-pressure water blasting equipment and results are reported.

4.2 Drive unit, pump unit, and hydraulic hose reel (where fitted) are inspected for fluid levels in accordance with manufacturer's instructions.

4.3 Hose and couplings are inspected for rating and size in accordance with manufacturer's instructions.

4.4 Low-pressure water blasting equipment is inspected for safe condition in accordance with manufacturer's instructions.

Range equipment may include but is not limited to – safety devices, electrical leads, engine controls, water filters and strainers, hoses, couplings, hose fittings, jetting gun, lance, ancillary equipment such as trailer or skid-mount.

4.5 Jetting nozzles are cleaned and defective nozzles are replaced in accordance with manufacturer's instructions.

Range de-pressurisation prior to carrying out maintenance.

4.6 Control valves and guard are cleaned, and foot mechanism (where fitted) is inspected in accordance with manufacturer's instructions.

4.7 Low-pressure water blasting equipment is stored in accordance with manufacturer's instructions.

Planned review date	31 December 2025
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Status information and last date for assessment for superseded versions

Process	Version	Date	Last Date for Assessment
Registration	1	28 August 2000	31 December 2012
Review	2	20 November 2006	31 December 2013
Review	3	18 October 2012	31 December 2016
Review	4	16 April 2015	31 December 2021
Rollover and Revision	5	13 December 2018	31 December 2023
Review	6	26 August 2021	N/A

Consent and Moderation Requirements (CMR) reference	0013
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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 Competenz qualifications@competenz.org.nz if you wish to suggest changes to the content of this unit standard.