



Australian Government

MSMWJ304 Operate a high pressure water jetting system

Release: 1

MSMWJ304 Operate a high pressure water jetting system

Modification History

Release 1. Supersedes and is not equivalent to MSMWJ301 Operate a high pressure water jetting system. Unit code changed. Application amended. MSMWJ202 added as a pre-requisite. Elements and Performance Criteria changed. Range of Conditions removed. Assessment Requirements changed which also includes 120 hours added to performance evidence.

Application

This unit describes the skills and knowledge required to autonomously operate a high pressure water jetting system to clean, prepare, abrade, cut or demolish concrete, steel or other plant, equipment, vessels or infrastructure.

This unit applies to operators who use equipment that meets the requirements of a Class B system as defined by *AS 4233.1 High pressure water jetting systems – Part 1: Safe operation and maintenance*, or its authorised replacement, and in compliance with *Safe Work Australia Guide for Managing Risks from High Pressure Water Jetting*, its state/territory equivalent (where one exists) or the authorised replacement.

The worksite may be a client's site or a site belonging to the organisation.

No licensing or certification requirements exist at the time of publication. Relevant legislation, industry standards and codes of practice within Australia, including requirements for refresher training, must be applied.

Pre-requisite Unit

MSMWJ202 Use high pressure water jetting equipment.

Competency Field

Operations

Elements and Performance Criteria

Elements	Performance Criteria
Elements describe the essential outcomes.	Performance criteria describe the performance needed to demonstrate achievement of the element.
1. Prepare for work	1.1 Interpret and follow job requirements 1.2 Complete site access and work control requirements 1.3 Identify known site hazards and required hazard controls 1.4 Confirm work team members comply with site and job competency

Elements	Performance Criteria
Elements describe the essential outcomes.	Performance criteria describe the performance needed to demonstrate achievement of the element.
	requirements 1.5 Lead toolbox meeting or similar 1.6 Select, check and load consumables, equipment and personal protective equipment (PPE) required for job 1.7 Complete pre-work documentation to job requirements
2. Use issued drawings	2.1 Confirm all drawings and drawing versions and validate against job requirements 2.2 Identify dimensions and check all high pressure water jetting equipment is appropriate for job
3. Complete on-site preparation	3.1 Confirm job scope, location and requirements with job owner or contact person 3.2 Communicate with site authorities and obtain correct work permits in accordance with site procedures 3.3 Review and confirm job scope on-site with team 3.4 Read, interpret and follow job-related documentation 3.5 Define work area and confirm required exclusion zones 3.6 Confirm that required quantity and quality of water is available 3.7 Confirm available waste disposal is adequate for all waste generated by job 3.8 Recognise and control job and site-specific hazards 3.9 Identify competency of other team members and degree and means of required supervision 3.10 Communicate any additional job needs back to base
4. Set up water jetting job	4.1 Prepare worksite to comply with job, safety and environmental requirements 4.2 Inspect, assemble, check and flush water jetting equipment in accordance with high pressure water jetting standards 4.3 Complete pre-start on system, test emergency shut-off and have equipment repaired prior to starting job if not functional 4.4 Communicate with other work groups as appropriate to ensure safe and efficient operation of water jetting equipment 4.5 Establish appropriate means of communication between operators and ensure correct positioning of personnel

Elements	Performance Criteria
Elements describe the essential outcomes.	Performance criteria describe the performance needed to demonstrate achievement of the element.
	4.6 Ensure hazard controls and PPE are operational and adequate
5. Undertake water jetting job	5.1 Start up high pressure water jetting equipment for safe operation 5.2 Communicate with and supervise other operators as required by job 5.3 Operate equipment to meet job requirements 5.4 Monitor hazards and activate emergency stop as required 5.5 Monitor job, conditions and equipment and maintain agreed real-time visual and verbal communication 5.6 Recognise and diagnose problems and take appropriate action to resolve them
6. Complete water jetting job	6.1 Shut down high pressure water jetting equipment 6.2 Report job completion and details of any issues arising from the task in accordance with client/organisation requirements 6.3 Disassemble equipment when safe to do so 6.4 Clean job site and equipment and ensure appropriate disposal of all waste 6.5 Disassemble exclusion zones when access to area is safe 6.6 Complete routine equipment servicing and store items in appropriate location 6.7 Identify and action restock requirements for spares and consumables 6.8 Complete documentation to job requirements

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential to performance.

Foundation skills essential to performance are explicit in the performance criteria of this unit of competency.

Unit Mapping Information

Release 1. Supersedes and is not equivalent to MSMWJ301 Operate a high pressure water jetting system.

Links

Companion Volume implementation guides are found in VETNet -

<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=d1287d36-dff4-4e9f-ad2c-9d6270054027>

Assessment Requirements for MSMWJ304 Operate a high pressure water jetting system

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Performance Evidence

There must be evidence the candidate has completed the tasks outlined in the elements and performance criteria of this unit, and demonstrated the ability to:

- perform the activities for a period of 120 hours under supervision
- autonomously assemble and operate equipment that meets the requirements of a Class B system as defined by *AS 4233.1 High pressure water jetting systems – Part 1: Safe operation and maintenance*, to complete:
 - at least one gun operation AND
 - at least one of the following:
 - pipe cleaning (not stormwater/sewerage system)
 - heat exchanger/tube cleaning
 - surface preparation
 - vessel (interior) cleaning using a cleaning head.

Knowledge Evidence

There must be evidence the candidate has knowledge of:

- existence and purpose of *AS 4233.1 High pressure water jetting systems – Part 1: Safe operation and maintenance* and *Safe Work Australia Guide for Managing Risks from High Pressure Water Jetting*
- system controls required by *AS 4233.1 High pressure water jetting systems – Part 1: Safe operation and maintenance* and *Safe Work Australia Guide for Managing Risks from High Pressure Water Jetting*
- hazards and hazard controls specific to the operation of water jetting equipment, including:
 - physical hazards
 - stored energy hazards
 - working environment hazards
- environmental protection considerations for water jetting operations
- principles of operation of water jetting equipment and its component items
- types and application of water jetting equipment and its component items, including:

- pump
- motive power
- hoses
- guns, foot control devices, lances and nozzles
- equipment variables, including:
 - hose type, size and restraints
 - nozzle type
 - pressure and flow required
 - additives to be used
- units of measurement used in drawings and their practical application for equipment selection
- graphics and symbols used on drawings
- correct methods of starting up, shutting down, operating and controlling water jetting equipment and its component items by type and application
- communication systems used between operators, including hand signals
- operational parameters and limits of equipment
- types and causes of known problems for water jetting and its components and corrective action appropriate to the problem cause
- importance of monitoring and controlling job conditions
- methods for monitoring job variables, and the appropriate corrective actions
- types of situations that require:
 - activation of an emergency stop
 - stopping work until a situation is resolved
- procedures for:
 - raising the alarm (when, how, who to)
 - responding to injury
- routine cleaning and servicing requirements for water jetting equipment
- types of waste generated and procedures for safe disposal.

Assessment Conditions

Skills must have been demonstrated in the workplace or in a simulated environment that reflects workplace conditions and contingencies.

The following conditions must be met for this unit:

- use of suitable facilities, equipment and resources, including:
 - high pressure water jetting system and other tools and materials to complete tasks specified in the performance evidence
 - safety and personal protective equipment (PPE)
 - job documentation.

Assessors must satisfy the NVR/AQTF mandatory competency requirements for assessors.

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