



INCIDENT ALERT

General Information

Date of Incident	27/11/15
Type of Incident	Lost time injury

About the Person

Occupation of Person	HPWJ Operator
Experience of Person	10 years plus
HPWJ Training Level	Company training
Other Training	
No. of Hours Completed	1 hour

About the Incident

Time of Accident	7:55am
Result of Injury	Hospital inpatient
Lost Days	Unknown
Description of Incident	Puncture wound to abdomen caused by high pressure water
What Equipment Category	Gun Work
Equipment Used	High pressure gun.
What happened unexpectedly	A HP hose failed at the gun connection which punctured the hose shroud causing the injection of high pressure water into the body
What Was Person Doing	Holding the HP gun while the pressure was being increased towards the working pressure of 2000bar during set-up.

Corrective Action

What Immediate Action	Work stopped, medical attention sought. Investigation started ASAP.
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Preventative Action

Elimination	
Substitution	
Isolation or barriers	Use correctly rated hose shrouds
Engineering	
Administration	Remove hose shrouds when inspecting HP hoses prior to use. Inspect hose shroud as part of the prestart checks for damage prior to use.
PPE	Correctly rated body armour will protect the operator from injection of HP water.

LEARNINGS

AS/NZS 4233.1 (2013) 2.2 states:

A water jetting systems shall not be used unless—

- (a) it has been inspected, serviced and 'fit for use' tested in accordance with the manufacturer's recommendations; and
- (b) it is free from any fault identified at the last inspection or service which may adversely affect the performance and safe operation of the equipment.

3.2.3.1 Hose inspection

All hose assemblies shall be visually inspected prior to each use to ensure the following:

- (a) The correct pressure rating and size is selected.
Operators shall ensure the pressure rating of the hose assembly is adequate for the intended application
- (b) There is no apparent structural damage, e.g. corroded or broken wires, bulging, kinking or cuts.
Where the hose assembly shows evidence of damage, steps shall be taken to determine its serviceability before use.

(e) Additionally the point at which the hose attaches to any hand or foot operated device shall be protected by an over-sheath shroud manufactured from materials capable of withstanding a direct force of the jet of high pressure water to protect the operator in the event of hose separation/or end failure.

Examples of shrouds and their ratings: *Figure 1*



Figure 1 The shroud provides effective protection for the operator as it has been tested for 3000 bar / 43500 psi. Gun Shroud.

Figure 2



Figure 2 The shroud It is not tested to contain pin hole leaks, designed for hose burst containment at 3000 bar / 43500 psi. Foot pedal shroud. **It is NOT intended for use on any hand held equipment.**

Figure 3



Figure 3 This shroud does have different ratings, it is critical to match the shroud rating to the maximum pressure of the jetting unit being used.