

## Clearing Blocked Hydrovac Machines

CAMs 426009

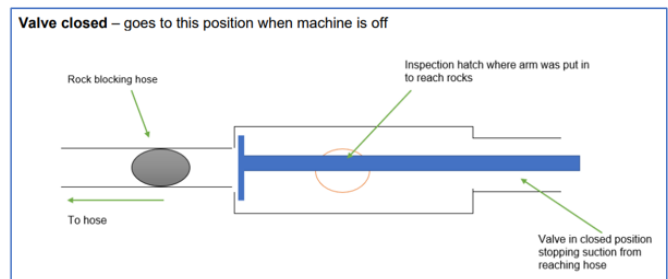
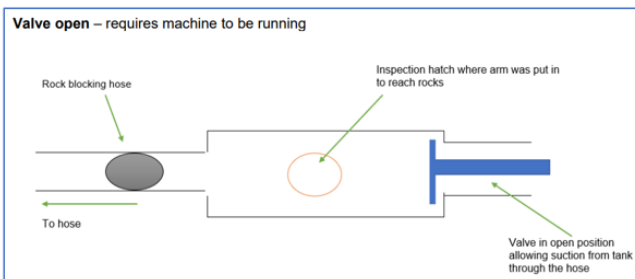
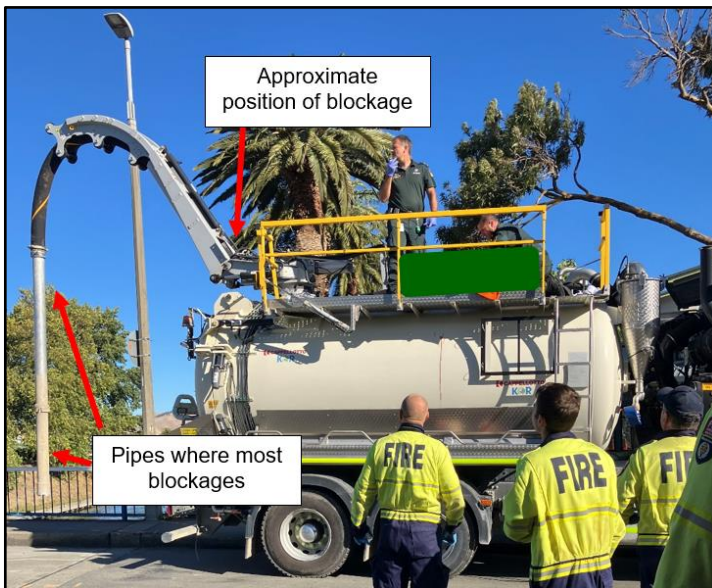
### 1. Relevance

This alert is important for all employees and subcontractors who contract in or use Hydrovac machines.

### 2. Incident

A large rock blocked the top of a hydrovac hose, near the vacuum tank. In order to access the top of the hose, the valve into the tank needs to be in the open position. This needs the machine to be running.

The operator released the vacuum and went to the platform at the top of the machine. He took the remote control with him so that no-one could close the valve while he was clearing the blockage. He opened the top hatch and dislodged the rock with a crowbar, but it fell back into the hose and blocked it again. When the operator reached in to remove the rock, his foot bumped the emergency stop button on the remote control and the valve closed on his arm almost severing it.



### 3. Contributing Factors

- The operator's manual had no unblocking procedure.
- The hatch that was opened had obviously been used many times. That, and the fact that there is a platform available, has led the operators to believe that this was a safe way to clear a blockage.
- Hydrovac's are designed to deal with sludge and slurry, rather than river gravels which are common in many parts of New Zealand.
- Despite a very similar incident with a Cappellotto hydrovac in 2018 (not Fulton Hogan) there was still no signage on the danger point.
- Retaining control of the remote was seen as a safe way to "lock the machine out" during unblocking.

### 4. Additional information

All Fulton Hogan business units have reviewed the hydrovac's in use, and operator knowledge of unblocking procedures. Every brand of hydrovac has different ways of preventing or dealing with blockages. [The most common method of preventing a blockage is to have a series of pipes and hoses that increase in diameter at every connection point.](#) So, a small pipe feeds into a larger hose, feeds into a larger hose etc. This means blockages happen at the pipe end, where they are easier to clear.

The Cappellotto supplier has since made a minor modification to the machine, fixed warning labels, and added relevant information about clearing blockages to the operator's manual.

### 5. Mandatory Requirements

By 31 May 2024

1. Using the [Plant design & modification standard](#), please make engineering modifications to:
  - (a) Reduce the chance of blockages occurring, **and**
  - (b) Provide [a safe means of clearing blockages with the machine de-energised](#) and update the operator's manual accordingly.Existing solutions include:
  - [Reducing the pipe size relative to the hose](#) e.g. 6" pipe to 8" hose.
  - [Using a bolt, lug, vein or fin](#) inside the pipe to reduce the intake diameter.  
NB Consider the risk of material such as sticks accumulating and creating a new problem.
  - [Adding an access hatch](#) that can be accessed to clear blockages with the machine fully de-energised.
2. A reminder: All new Hydrovac purchases, leases, rentals, and hires should be made through our national plant team led by Tim Glanville. Models outside their recommendations will require GM level approval.
3. A Hydrovac CTO is being developed.
  - If your Region or Project owns a Hydrovac machine, please appoint a local expert who will [assess the competence of existing, new, and back up operators before 31 May](#).
  - Please ask your [Hydrovac subcontractors](#) to confirm the competency of their operators in writing. They can use our form to assess operator competence if they don't have one of their own.
4. Given the complexity of a Hydrovac machine, [all dry hire units, regardless of the hire term, must:](#)
  - (a) be fully inducted, **and**
  - (b) be loaded into our fleet system and assigned an asset number, **and**
  - (c) satisfy our six-monthly Certified Safe requirements.
5. Please [give your hydrovac subcontractors a copy](#) of this alert.

## 6. Revision History

Date	Author	Brief Description of Change
5/4/24	J Prigmore	Original draft.
11/4/24	J Prigmore	Updated following FHNZ review of controls & supplier changes.
22/4/24	T Talbot	Peer Review.
23/4/24	S Shore	Simplified for distribution – Thank you (TT).

## 7. Closeout Requirements

Please discuss this Red Alert with your teams, complete the items below and return to your Safety Manager. They will collate all responses for the business unit and send a single confirmation to the HSQES Analyst at [nzincident@fultonhogan.com](mailto:nzincident@fultonhogan.com) before **7 June 2024**

7.1. What date was this Red Alert communicated to the workplace: \_\_\_\_/\_\_\_\_/2024

7.2. Could this incident occur in your Region/Project? (Circle your answer below)

**YES**      If Yes, please answer questions 7.3 & 7.4  
**NO**        If No, please answer question 7.5

7.3. Have all the actions and recommendations been implemented? (Circle your answer below)

**YES**      If Yes, please answer question 7.4  
**NO**        If No, please answer question 7.5

7.4. Are these measures sufficient to eliminate or reduce the risk of an incident (or similar) described in the alert from happening again? (Circle your answer below)

**YES or No**

If No, please raise a CAM's case listing the required actions and accountabilities to be taken in order to eliminate or reduce the risk. Record the CAM's number below:

**CAMs Case Number:** CAMs-\_\_\_\_\_

7.5. Please note the reasons why this incident could not occur within your region / project?

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In signing this document, I confirm that the actions above have been completed in this region/project.

Region / Project: \_\_\_\_\_

Region / Project Manager Name: \_\_\_\_\_

Signature: \_\_\_\_\_

Date: \_\_\_\_\_