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## Concrete pumping

This safety alert highlights the serious health and safety risks of concrete pumping equipment failures, including the failure of delivery systems and components.

### What happened?

There have been multiple incidents across New Zealand and Australia where concrete pumping equipment has failed under pressure resulting in serious harm from the uncontrolled release of pressurised concrete.

### How does it happen?

When blockages occur in the equipment, pumping pressure can exceed 85 bar. This can cause damage and failure of system components, resulting in the sudden and uncontrolled release of the pressure energy.

Blockages and failures in pumping equipment can occur due to a number of factors, such as:

- issues with the equipment or pipeline system
- inadequate maintenance of equipment
- problems with the concrete mix
- operator error.

### What can be learnt from the incidents?

The incidents highlight the dangers in using concrete pumping equipment. PCBUs must ensure:

- that the pressure rating of the concrete pump does not exceed that of the pipeline and its components
- equipment and components are compatible
- all equipment and components are used, inspected, and maintained in accordance with manufacturer's instructions

- that each section of the delivery line is adequately supported or secured as required and that locking pins are used and suitably engaged on quick-release pipe clamps.

PCBUs must ensure that workers have received the necessary training and instruction to enable them to perform their work in a way that is safe and without risk to their health and safety, this includes training on recognising the signs of potential blockages and identifying pipe and pipeline component defects.

A documented preventative maintenance and inspection regime is essential for the safe and efficient operation of concrete pumping equipment.

Regular inspection and maintenance by competent persons should be undertaken to ensure that concrete pumping equipment is safe and without risks to health and safety, this may include inspection and testing by an independent third party.

Components should also be permanently marked with the manufacturer's name, or other identifying feature, and the maximum permissible operating pressure.

### Where can you find information?

The [Concrete Pumping Health and Safety Guidelines](#) provide practical advice about the safe operation and maintenance of concrete pumping equipment.

PCBUs that work together will likely share health and safety duties in relation to each other, these are known as [Overlapping duties](#)