



**CEMENT CONCRETE  
& AGGREGATES AUSTRALIA**



## CCA Guideline Water Wash Out or Blow Back



**Allowing concrete to be blown back into the agitator barrel is an inherently risky procedure unless it is carefully controlled. Air pressure can cause anything inside the pipeline to act as a high velocity projectile. Water wash out is generally a safer alternative.**

**This guideline outlines the risks and suggested controls for cleaning out concrete pump lines using blow back or water wash out procedures.**

Some concrete suppliers do not permit blowback to be conducted at all and written approval must be obtained from those concrete suppliers that do permit blowback. A full risk management process must be completed prior to the commencement of the procedure and the concrete delivery driver must remain clear of the truck while the process is being conducted.

Water washout of the pipeline is generally a safer alternative to blowback as water cannot be compressed to the same degree as air and should be discussed with customers and conducted wherever practical.

Water is pumped through the line and a sponge forces the concrete slurry into waste concrete bins. Water is blown back through the system to the pumping area where it is diverted into a release valve that is routed into sediment separation tanks. The water can then be recycled after treatment. This process has a lower risk of explosion, reduces waste concrete and allows for recycling of waste concrete but does need concrete waste & recycled water tanks.

## **BLOWBACK**

Allowing concrete to be blown back into the agitator barrel is an inherently risky procedure unless carefully controlled. Air pressure will cause anything inside the pipeline to act as a high velocity projectile.

<b>HAZARD IDENTIFIED</b>	
High pressure and pipe movement can cause pipe joints to fail and break apart	<ul style="list-style-type: none"> <li>• Blowback must occur via well secured fixed line to prevent "whipping". The steel pipe must extend 600 mm past the barrel drip ring</li> </ul>
Concrete under pressure during blowback can rebound from the rear fins and exit the barrel damaging property and injuring bystanders	<ul style="list-style-type: none"> <li>• Appropriate work platforms must be provided to fit the blowback line - the pump operator is responsible for fitting the line</li> <li>• Where blowback is permitted the truck must be legally able to hold the quantity of concrete blown back</li> <li>• When using compressed air to clean a line, a pressure relief valve and "catch basket" are to be used</li> <li>• The pump operator must inform the truck driver when blowback commences and is completed</li> </ul>

## **ONGOING ACTIONS**

- Inform people working in the vicinity of the blowback area about these risks.
- Make this an agenda item at safety meetings.

Some premixed concrete suppliers do not permit blowback into their trucks and written approval must be obtained from those companies that do permit blowback.



More complete guidance on the safe operation of concrete pumping equipment is available in the CCAA Concrete Pump Delivery Industry Guideline.

## WATER WASHOUT

POTENTIAL HAZARDS	RISK REDUCTION MEASURE
If pipe is not preloaded a delay may occur causing blockages or line seizure	Before concrete pumping commences, a pipe section with 2 x silicone pigs must be preloaded so that the water pumping may commence at any time
Water supply maybe exhausted	The operator must check that the water tank has sufficient water for the washout prior to commencement
Water could seep past pig causing segregation and blacking	<p>If the water does not force the concrete through to the top of the line, a blockage in the pipe system maybe evident</p> <ul style="list-style-type: none"> <li>• The boom operator should instruct the pump operator to pause water pressure immediately</li> <li>• A barricaded/exclusion area is to be established within the affected area. Tower boom pump should be placed in a vertical position</li> <li>• Pump crew should tap test pipes to locate blockage</li> <li>• Pump operator must release water pressure while blocked pipe is removed</li> <li>• Blocked pipe should be removed, cleared and reinstalled</li> </ul>
Rubber discharge hose whipping	Rubber discharge hose to be removed before cleaning out of pipeline
Environmental damage	<p>Always discharge washout water and discarded concrete into holding tank (plug in pump) or water tank (static pump). Cover/protect drains. Use socks to stop solid particles entering water ways</p> <p>Once sponge, pig and water are blown into the waste bin, stop water wash</p> <p>Compressed air to be used to direct water back to tank. Cover/protect drains. Use socks to stop solid particles entering water ways</p>
Eye injury	Stand clear. Wear safety glasses

Cement Concrete & Aggregates Australia is a not for profit organisation sponsored by the cement concrete and aggregate industries in Australia to provide information on the many uses of cement and concrete. This publication is produced by CCAA for that purpose. Since the information provided is intended for general guidance only and in no way replaces the services of professional consultants on particular projects, no legal liability can be accepted by CCAA for its use.

Images supplied by Specialised Concrete Pumping.



**CEMENT CONCRETE  
& AGGREGATES AUSTRALIA**

#### CONTACT US

**NATIONAL OFFICE** Level 10, Altitude Corporate Centre, 163-175 O'Riordan St, Mascot NSW 2020

**POSTAL ADDRESS** PO Box 124, Mascot NSW 1460 T (61 2) 9667 8300

**ADELAIDE** T (61 2) 9667 8300

**BRISBANE** Level 14, 300 Ann St, Brisbane QLD 4000 T (61 7) 3227 5200

**MELBOURNE** Suite 910/1 Queens Road, Melbourne VIC 3004 T (61 3) 9825 0200

**PERTH** 45 Ventnor Avenue, West Perth WA 6005 T (61 8) 9389 4452

**TASMANIA** PO Box 1441, Lindisfarne TAS 7015 T (61 3) 6491 2529

**ONLINE DETAILS** [www.ccaa.com.au](http://www.ccaa.com.au) **E** [info@ccaa.com.au](mailto:info@ccaa.com.au)