

# SAFETY PROCEDURES

## USE OF COMPRESSED AIR IN HIGH RISE CLEANOUT



AMERICAN CONCRETE  
PUMPING ASSOCIATION

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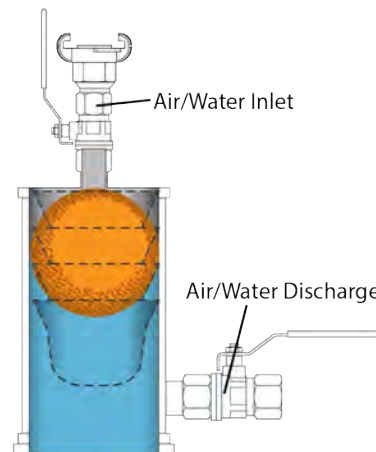
## Safety Procedures: Use of Compressed Air in High Rise Cleanout

WARNING! Compressed air cleanout is one of the most hazardous jobs of a pump operator. Never take it for granted. Never cut corners, and never skip steps.

1. Blowing out a separate placing boom or high rise job with compressed air requires several things; all of which should be in place before the job begins:

1) Training:

- a) Two trained personnel (one at the input end and one at the discharge end);
- b) Reliable communication between the two people;
- c) A properly sized air compressor, in working order;
- d) A shut-off valve or switching valve, with a primer port in the cleanout line at the bottom of the standpipe;
- e) A blowout ball or go-devil. For longer runs, a go-devil may provide a better seal to keep air from passing into the concrete. Some companies use square sponges or two sponges with water between them; use what your company requires;
- f) A blowout head with properly spaced air inlet and exhaust valves, where the space between the two is greater than the length of the longest cleanout device or combination used.



Air/Water can escape

- g) A ball catcher or other method of capturing the exiting ball or go-devil.
- h) A clean, non-adjustable clamp and gasket to accomplish connecting the blowout cap to the end of the boom.

2. Upon completion of the job, proceed as follows:

- 1) Close the shut-off valve at the bottom of the line. Do not allow the concrete to be routed to a cleanout line yet. If using a switching valve, do not operate it yet.

- 2) Remove all hoses from the boom and/or lay-down line and send for cleaning
- 3) Insert the ball or go devil into the end of the boom and attach the blowout cap. Be sure to insert the cleanout ball or go-devil before the switching valve is operated to prevent air from being introduced into the line ahead of the ball or go-devil, which can cause several different problems.
- 4) The pump operator must do the following before opening the shut-off valve or changing the position of the switching valve:
  - a) Lubricate the cleanout line with an appropriate priming agent and route the line into a ready mixed truck or other sturdy receptacle. Make sure the line cannot swivel, rotate, or whip. Strap or chain it to the discharge point to prevent movement. No hoses may be attached unless they are part of the designed discharge into the receptacle.
  - b) If you are not using a cleanout line, relieve the pressure between the pump and the shut-off valve by stroking the pump one or two strokes in reverse; then it's safe to open the line between the pump and the shut-off valve. Ready the point of discharge by installing a ball catcher or go-devil catch basket, tie down the pipeline, and clear the area of personnel and equipment.
  - c) Change the position of the switching valve, or open the shut-off valve. Concrete will begin to slide with the force of gravity. When concrete stops flowing, the operator on top should begin adding air to the inlet of the blowout cap. This forces concrete out of the line in front of the ball or go-devil.
  - d) As soon as concrete is flowing steadily, signal the operator on top to stop adding air.
  - e) As soon as the concrete flow slows again, signal the operator on top to add more air. Only add enough air to keep the concrete moving.
  - f) Continue with this pattern until you notice that the concrete is accelerating. At that time, signal the top person to bleed air out of the line. If the concrete stops before the ball exits, close the bleed valve and add air again. The objective is to have just enough air in the line to get the ball to the end, with very little air pressure left.
  - g) NEVER just open the top air valve and leave it on until the ball exits. The escape of a large amount of compressed gas creates a serious hazard.
  - h) Once the ball or go-devil has been discharged, drain any remaining air pressure using the air discharge regulator valve on the blowout head—before allowing anyone to open the line.

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on it!**  
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