



## Concrete Pump Blockages

### How to clear a concrete hose blockage

Concrete pumping crews and the concrete pump operator **must always** be aware of the possibility of a pump line blockage.

**A rise in line resistance, as shown on the pump pressure gauge, indicates a line blockage.**

#### IDENTIFYING THE BLOCKAGE LOCATION

1. The first suspect spot for blockage is the reducer, which connects the concrete pump to the pipeline system. A quick build-up in pressure prior to the blockage indicates the blockage is most likely in the pump area. Slow pressure build-up is indicative of a blockage further down the line, nearer the delivery end.
2. By alternately reversing the pump and resuming pumping for a few cycles, the pump operator may be able to break loose a minor rock blockage. **DO NOT** try this more than a couple of times as it can tighten the blockage in the pipeline.
3. Make sure the line is no longer under pressure by reversing the pump prior to clearing a blockage.
4. The operator or line hand need to examine the system, especially at the elbows or discharge hose. Done by tapping a hammer along the pipeline. Where concrete is blocked, the hammer will produce a dull thud, as opposed to a more ringing sound where the line is clear.
5. Inspect all pipe joints for grout leakage, as this can be indicative of grout loss and subsequent blockage.
6. Place foot carefully on the discharge hose to depress it, a blockage may be located where the soft hose becomes firm, indicating blocked aggregate.

**DO NOT WALK ALONG THE HOSE OR USE 2 FEET TO JUMP ON THE HOSE.**

#### CLEARING THE BLOCKAGE

7. Once blockage identified, setup an exclusion zone, at the end of the hose, in the line of fire. **NO ONE permitted in the exclusion zone during the releasing method.**



8. **All persons involved in attempting to free the blockage must wear goggles or a face shield.**
9. Stand to one side of the line and remove the coupling nearest to the blockage. Let all the free-flowing concrete run out of the open end of the line by lifting the line, then bend the hose or tap on the pipeline in the area of the blockage and shake out the loose aggregate.
10. Once blockage removed, the hoses are reconnected and pump restarted.
11. Never try to remove a blockage with compressed air. Remember, the pump can produce over 1,200 PSI on the material while an air compressor generates only 150 PSI. So, if the pump cannot push it, air never will. The primary difference is that air is compressible while concrete is not; which creates the potential for a very dangerous release of energy.

**REPORT ANY CONCERNS TO SITE MANAGEMENT**