

## Maintenance of machinery whilst running

### Summary of incident

**NEAR MISS / SAFETY INCIDENT / ENVIRONMENTAL INCIDENT**

The initial incident was reported as a near miss caused by maintenance work being carried out whilst plant was running. Upon investigation this was found to be a near miss involving an unsecured water outlet hose which was whipped around when the air compressor was switched on.

### Events leading to incident

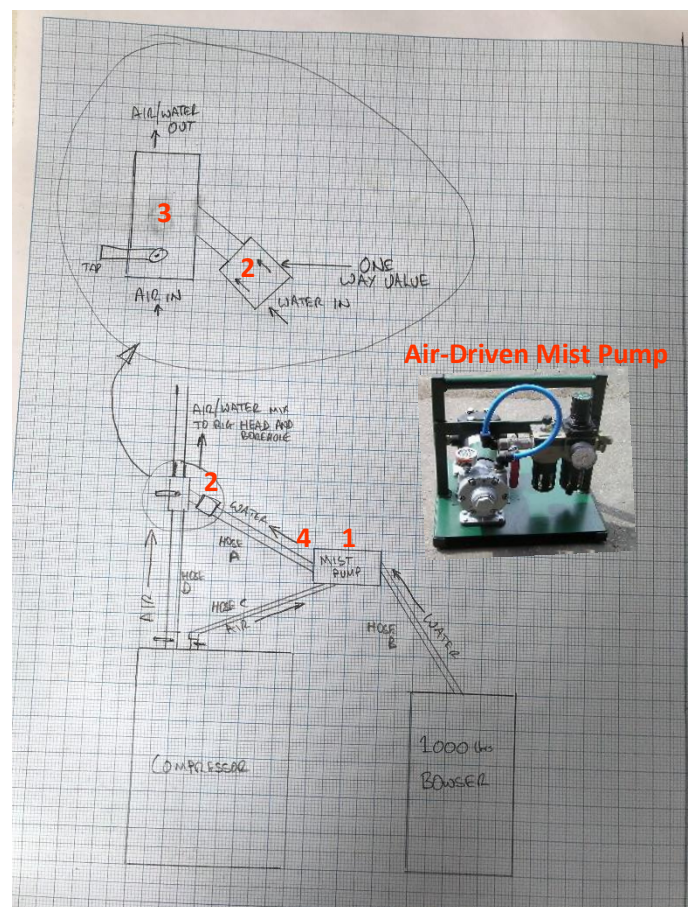
1. The Lead Driller noticed that no water was reaching the drill bit.
2. He thought it was a problem with the air driven mist pump<sup>1</sup> which normally introduces the water into the airline through a non-return valve<sup>2</sup> at the controls<sup>3</sup>.
3. The Lead Driller switched off the compressor and checked the pump and disconnected the water outlet hose<sup>4</sup> at the mist pump. No possible cause was visible.
4. The compressor was turned on with the water outlet hose still disconnected to check if water was being discharged from the pump – from 4 - 2.
5. The water outlet hose then whipped around as compressed air had been diverted the wrong way through the faulty valve<sup>2</sup> towards the mist pump.
6. The air compressor was immediately switched off.

### Conclusions of incident investigation

- The tap at the controls<sup>3</sup> had not been turned off before restarting the compressor although it would not have been anticipated for compressed air to be running back through the water outlet hose<sup>4</sup>.
- Upon investigation the non-return valve<sup>2</sup> was found to have a mechanical fault.
- The original problem was caused by air being diverted the wrong way through the non-return valve stopping the water being pumped from the mist pump.
- The non-return valve was replaced, checked and drilling re-commenced.

### Lesson Learnt and Reminders

1. Turn off all valves and taps possible to isolate the areas being investigated and release any pressure remaining in the hoses in a controlled manner.
2. Do not carry out investigatory work with air compressors switched on unless absolutely necessary.
3. Only disconnect hoses as a last resort and only after the pressure has been released.
4. Do not carry out any maintenance of compressors unless trained and competent to do so.
5. Use whip checks on hoses and air-lines.



1. **STOP** stop work
2. **LOOK** look around you and identify any new hazards
3. **ASSESS** think about how to eliminate or control the risk
4. **MANAGE** make sure everybody is aware of any changes