



Hydraulic Fluid Injection

From: External Contractors

Author: D McCulloch
Status: RIDDOR Major Injury

Issued in Anglian Water by: D Matthews

What happened?

The incident arose during a task to find the source of a small hydraulic leak on a drilling rig. A fitter found the leak and asked for the machine to be shut down so that the hose could be replaced. When it was shut down the fitter placed his double-gloved index finger over the wear spot on the hose as a way of keeping track of the location of the leak.

However, because of the valve arrangements, the system remained pressurised and pressure actually increased. This created a back-pressure hazard for approximately two seconds after the shut down. Hydraulic fluid burst through the wear spot on the hose and was injected through the double-gloves into the index finger.

The hydraulic fluid caused severe damage to tissue and blood vessels and emergency surgery was required (to track and remove the fluid from the hand). Even though medical assistance was quickly on hand, the injuries sustained were horrific.



Further actions / Learning points:

- Hydraulic fluid is highly dangerous (and can be fatal) if injected into the bloodstream.
- Standard PPE, such as gloves or other clothing, offers little protection from high-pressure hydraulic leaks.
- Never touch the site of a hydraulic leak with any part of your body, even if PPE is being worn.
- Seek medical attention immediately if you have been affected by a pressurised leak of hydraulic fluid
- Hydraulic fluid can cause serious harm if it is allowed to enter cuts, scratches, etc. - always keep them covered and wear the required PPE when working with hydraulics.