

Finger Entrapment in Barrier Driving Rig

SafetyAlert

July 2017

Incident description:

During the setting up process of an Orteco post knocker, an operative had the end of his middle finger cut off.

The contractors hadn't noticed that the lower jack ram was extended upwards into the percussion head. This put pressure onto the lower mast extension release pin, trapping it. The pin was spring-loaded and the operatives thought it was jammed. One operative pulled out the pin with a pair of mole grips, whilst another operative was holding the slide extension. The pin released, the slide extension moved forward. This disengaged the lower jack arm allowing the percussion head to drop, trapping his finger between the percussion head and the lower mast severing the tip instantly.



Orteco Post Knocker



Mast release pin in unlocked position



Location of Mast release pin and safety lock pin (red)



Lower Jack Ram extended onto Head



Finger trapped between percussion head and extension at this location.

Initial Findings

Contributing factors, resulting in this injury.

- Operatives didn't stop work when something changed.
- Too many operatives involved.
- Nobody had taken charge of the task.
- No communication between those involved.
- They were not undertaking the task as per training.
- A vital safety component was missing, the safety lock (red) pin which prevents the head from coming down the mast.

Learning Points

- Ensure cooperation and communication between operatives.
- Check safety components are in place before using equipment.
- Make sure pre-start checks are done correctly.
- Ensure safe systems of work are in place and followed.
- Re-affirm the Golden Rules: Stop work if anything changes or safe systems of work have not been followed. This may have led to the missing locking pin and extended ram being noticed here.

Action taken or to be taken

- Suspension of Orteco operations on MSM.
- Review of safe systems of work.
- Orteco rigs quarantined awaiting mechanical inspection by qualified body.
- All operatives to be reviewed and if deemed appropriate sent for re-training
- Investigation ongoing to identify further learning points and corrective actions.

Further Information:

For further information please contact the National Health and Safety Team via email on: NH&ST@highwaysengland.co.uk