

# SAFETY ALERT

*The BDA is committed to Improving Standards in Health & Safety, Quality of Workmanship and Technical Proficiency for the Drilling Industry and its Clients.*



## Cable percussion footbrake failure leads to serious injuries

### Background:

In April 2023, during a ground investigation project, an assistant driller was seriously injured when the drill string, consisting of two sinker bars and an 8" stubber struck him in the trunk. He suffered 5 broken ribs, bruises to his lung and spleen and was hospitalised for two days. He is making a good but slow recovery and is expected to be off work for approximately 6 weeks. The HSE have been made aware through the RIDDOR reporting system.

### What went wrong:

The immediate cause of the incident was a locking latch which became engaged under the foot pedal of the brake assembly, due to a locking nut becoming loose, preventing the application of the brake. As the driller attempted to apply the brake to hold the drill string in the normal manner, he was unable to stop the tooling from dropping with the brake, the driller had to rapidly apply the winch to prevent the tooling from dropping. This stopped the tooling falling, but caused it to swing away from the rig, hitting the assistant driller. The photographs below show the brake pedal in normal operation (left) and the brake pedal engaged with the locking latch under the brake pedal (right)



The loose nut, the shape/size of the 'blade' on the handbrake assembly and a lack of awareness of the potential problem, all contributed to the incident. The Company have spoken with other drilling contractors and operators, none have reported a similar incident. The Company have also looked at a range of examples of this assembly from other contractors and there is considerable variation in size and shape. It is their opinion, that this is an issue known about by the industry, who in some instances have modified the assembly to overcome this potential issue by placing a curve or chamfer on the top of the assembly, or by extending the length of the locking latch to prevent it becoming engaged under the brake pedal. The following photographs shows some examples of the same assembly, on different equipment.



*Brake lock with curved top*



*Small lock with square top*



*Larger lock with square top*

There is no clear and definitive guidance within the operator's manual as to what constitutes suitable and correct adjustment or maintenance schedule for the brake system. Or of the specific dimension of the locking plate assemble. The manufacturer has been approached for further guidance, but nothing detailed has been provided at this time.

#### **Outcome and lessons:**

All the company CP rigs have been recalled and examined. In several cases, the Company have changed the locking latch assembly to ensure the latch cannot be engaged under the brake assembly. Working with industry experts they have developed guidance for adjusting this assembly and have adjusted their rigs accordingly.

The company involved have added this guidance to their preventative maintenance schedule, trained their drillers to check the brake assembly and added the specific requirement to check the brake to our daily check sheets.

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