



# SAFETY ALERT

## Drilling Rig Proportional Brake Fails

<b>Safety Alert:</b> #11 - 2010	<b>Release Date:</b> May 18, 2010
<b>Incident Type:</b> Equipment Failure	<b>Country of Origin:</b> Western Canada

### Description of Incident:

- A rig crew was drilling down a triple stand of drill pipe. When there was 2 meters left of the stand to drill, the top drive started to stall out at 6000 ft/lbs of torque, but the limit was set at 17 000 ft/lbs.
- The VFD computer screen in the doghose was reading a communication issue. The Motorman and Floorhand began to check the PLC cables in the doghose for the top drive for damaged lines or loose connections. The driller went up on the man-riding winch to check the PLC cables on the top drive.
- Once into position to look at the cables, the drill console lost power and the top drive crept down 1 meter, then free fell 1 meter until the elevators struck the floor. The draw works continued to un-spool the drill line. When all the drill line unspooled from the drum, it parted from the anchor and became wedged in the line spooler. This prevented the drill line from going to the crown.

### What Caused it:

- In the event of a power loss, a pneumatic valve releases air to apply the park brake. The daily function test of the park brake did not identify the valve as defective as the proper testing procedure was not followed. The procedure requires the draw works to be turning off but were not, thus allowing the draw works to hold the hook load preventing actual park brake function.

### Corrective Actions:

- Conduct function testing of safety critical equipment and document such tests, scheduled on a risk based inspection interval.
- When the driller leaves the controls unattended, or when troubleshooting, checking electrical or mechanical issues related to the VDF to the draw works or the draw works itself, the park brake and the proportional brake are to be engaged. The only exception will be if the rig is in drilling mode.
- Add logic to the system program to monitor the air supply for the park brake circuit and display pressures on the drillers screen.

### Contact:

For more information of event, please contact [safety@enform.ca](mailto:safety@enform.ca)

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