

# Experience Transfer

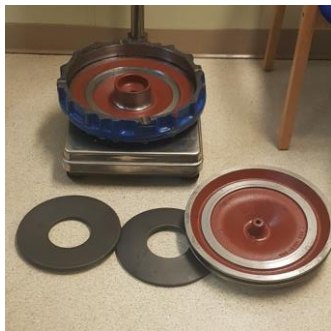
<b>Subject:</b>	Dropped Objects from CTLF	<b>Date:</b>	23/01/2019
<b>Region:</b>	UKAF	<b>Revision:</b>	2
<b>Product Line:</b>	<b>Coiled Tubing and Pumping</b>	<b>Case ref:</b>	<b>14214</b>
		<b>E.T. number:</b>	<b>939</b>

## Description:

### What happened:

During rigging up of Slickline equipment within a Coiled Tubing Lift Frame, the crew had started to lower the main winch wire when they heard a noise from the top of the frame followed by 4 items dropping approximately 80ft to the rig floor.

All personnel were out with the Red Zone but within the vicinity of the rig floor at the time of the incident but no one was injured as a result.



- Brake housing - 27kg
- Brake piston – 17kg
- Bevelled washers – 4kg, 4kg

Items which fell from CTLF

### Learnings:

- The main winch brake housing failed due to hydraulic overpressure.
- In 2012 a secondary brake was installed as part of an improvement to the hydraulic winches. This secondary brake required to have a separate case drain line fitted. The 2 case drain lines were connected at the winch control panel. When connected this gave the full circuit 2 methods of overprotection.
- Each brake had its own pressure reducing valve which reduced the pressure to the brake housing by diverting flow from the valve down the case drain line
- There was no secondary overpressure protection device on the hydraulic supply to the secondary brake when the case drain hose was blocked or disconnected

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- When the case drain was blocked or disconnected the full control pressure was able to build up across the reducing valve and pressure up in the brake housing
- The system design had previously been signed off by a 3<sup>rd</sup> Party company but by drawings only and not physically checked on the equipment
- The drawings did not clearly show quick connect couplings
- There was no method to confirm that the entire system had been installed correctly other than function test
- Function testing of the CTLF did not flag that the case drain line was blocked or not connected correctly due to time taken to build pressure
- There was no obvious method of alerting the operational crew that the main winch brake was experiencing overpressure
- Two of the four dropped objects were confirmed to hit the drill floor outside of the red zone in the dynamic yellow zone

**Actions:**

- Undertake full overview and design review of hydraulic system
- Implement upgraded design complete with over pressure protection to all parts of system
- Any maintenance checklists and associated paperwork to be updated to show enhanced systems and required checks
- 3<sup>rd</sup> Party Company to undertake physical verification of new system implemented as per design
- CTLF Documentation to be updated to show enhanced protection
- Create and roll out documented verification process for checking system hook up offshore
- Drilling contractor to review Red Zone procedures with reference to the control of personnel in the dynamic Yellow Zone
- Safety alert with finding and actions to be created and circulated to Industry bodies and relevant stakeholders

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