



Fatality Alert



MSHA MINE FATALITY – On March 6, 2019, a 35-year-old contractor with 35 weeks of experience was fatally injured when he was struck by a relief valve that was ejected from a 500-ton hydraulic jack. The hydraulic jack was being engaged to make contact with the frame of a P&H 4100A shovel when the relief valve was ejected.



The Final Report for this fatality has been published, and in the Final Report some very pertinent information comes to light; information that screams at us the importance of inspecting our equipment prior to use.

What follows is a synopsis of the report.

Safety Talk

ART 2.8.2

On March 4th, 2019, four Komatsu employees were tasked with rebuilding the tracks on an electric shovel, and install a powered set of access stairs.

During the afternoon of the March 5th, the four technicians positioned a bottle jack system under each corner of the shovel's frame so that they could lift it high enough to remove the track assembly. The bottle jack system being used consisted of an electric hydraulic pump which powered four independent 500-ton capacity bottle jacks. During the set-up of the system, it was found that the system's hydraulic pump was defective, so a replacement pump was brought to the site on the morning of the sixth.

After the jacks were put in place and the pump system was activated, many minor issues began arising: a return valve was closed and had to be opened, and some leaking fittings. Once those items were taken care of, it was found only three of the four jacks raised into position; the number four bottle jack would not raise. After inspecting the system and not finding any issues which would stop the number four jack from raising, the system was restarted and pressure was applied to the jack. After a few seconds, the relief valve for the number four jack violently ejected and struck one of the technicians in the abdomen; Timothy Rivers died on scene.

During the investigation, it was found that the threaded relief valve had been driven into the cylinder body to the point that the threads had been stripped prior to the incident; the threaded safety valve became as effective as a cork in a bottle. When the crew applied the 9,000 pounds of pressure to the number four jack, the cork ejected out with the force of a bullet. The conclusion of the investigation was that an extreme impact to the valve caused the damage, and that the deformity of the relief valve should have been visible to the technicians.

Four 500-ton bottle jacks designed to operate around 10,000 pounds of pressure were being used by four well-trained technicians, yet an incident occurred because a simple step was bypassed: the inspection of those tools before being placed in service; in other words, a shortcut was taken and a death occurred. We do not know why the shortcut was taken, all we know is that 35-year old Timothy Paul Rivers Jr., father of two little girls was soon to be step-father for his future bride's four daughters and two sons, is dead.

Don't take those shortcuts; inspect your tools before and after use, because lives may depend on your inspection.



