Significant Incident Report No. 285

Subject: Near miss when an excavator fell from crane during lifting operation

Date: 03 March 2021

Summary of incident

The Department of Mines, Industry Regulation and Safety's investigation is ongoing. Information contained in this significant incident report is based on findings at the time of writing.

In June 2020, maintenance workers were using a davit crane to remove a mini excavator from the primary crusher vault during planned shutdown work at a mine site. The mini excavator was rigged for lifting using access steps mounted to the side of the excavator track frame as lifting points.

During the lift, the weld attaching the step failed, resulting in the excavator falling approximately 10 metres to the floor of the crusher vault. Two workers were in the bottom of the vault at the time the excavator fell.

Left: Damaged step used as a lifting point with lifting point signage. Right: Rear track frame with failed step weld.

Direct causes

The weld attaching the access step to the rear track frame separated, resulting in a loss of control of the load, and subsequent failure of the chain slings attached to the excavator.

Contributory causes

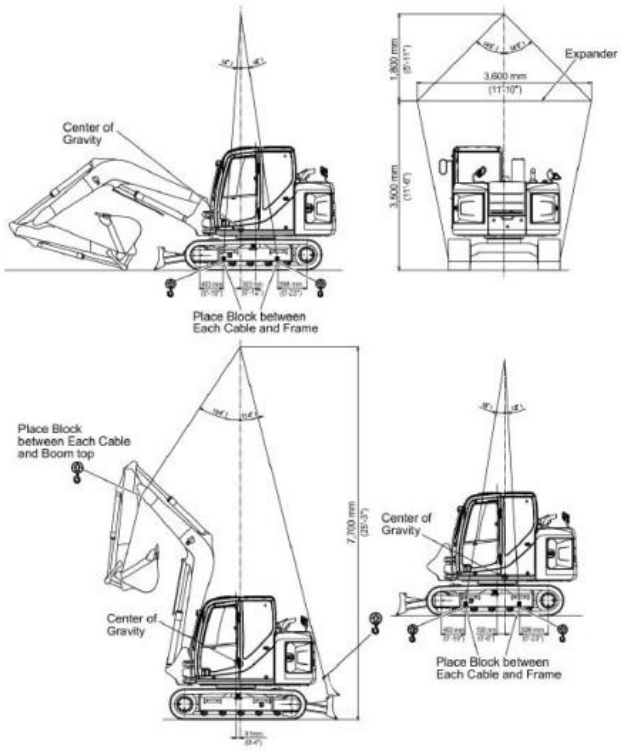
- The rigging arrangement was not configured as per the original equipment manufacturer's (OEM) recommendations, which required the use of a spreader beam and lifting slings installed below the track frame between the lower track rollers.
- The task job hazard analysis (JHA), detailed job plan and lift study did not require the workers to refer to the OEM's manual for the correct lifting procedure for the equipment.

- The excavator has signage attached to the track frame below the access steps indicating the location of the lifting point; however, this signage does not clearly identify or display the approved lifting method.
- The rigger who attached the lifting chains to the excavator believed that the signage located near the excavator access steps indicated that the step was the approved lifting point.

Actions required

Mine operators are reminded of the importance of maintaining safe systems of work for high risk rigging tasks. In particular:

- ensure workers involved in lifting operations review and follow the OEM's lifting procedure
- ensure the task-based risk assessment (e.g. SWMS, JSA, JHA, THA or lift study) is reviewed, assessed and approved by the supervisor
- confirm that the persons conducting dogging and rigging operations have the appropriate high risk work licences and have been assessed as competent
- confirm all lifting equipment used for the lift has been inspected and is suitable for the task
- isolate the hazard from the people while conducting lifts (e.g. use exclusion zones).



Lifting and rigging configuration as per OEM's recommendations.

Further information

Department of Mines, Industry Regulation and Safety - *Guidance about dogging, rigging and lifting*
www.dmp.wa.gov.au/Safety/Guidance-about-dogging-rigging-6714.aspx

This Significant Incident Report was approved for release by the State Mining Engineer on 03 March 2021