

Extractive Industries Inspectorate

Promoting Safety and Health in the Extractive Industries

ACCIDENT/INCIDENT ALERT

27 September 2001

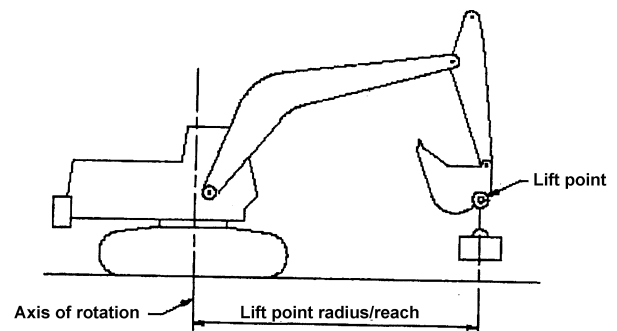
Unsafe Towing Technique Leads to Severe Injuries

Incident

On 27 March 2001, a bulldozer became stuck while moving clay and gravel on top of a stockpile. A towing chain was attached to the digger arm of an excavator, by placing the end-ring over an open hook that had been welded to the excavator arm. An attempt was made to tow the bulldozer off the stockpile. The chain rode up, sprang off the open hook, and smashed through the back window of the bulldozer (no intrusion barrier). It hit the driver of the bulldozer in the head; he was wearing a hardhat but still received severe head injuries.

Investigation

The immediate cause of this accident was the unsafe connection of the chain to the excavator. An open hook had been welded to the excavator arm and the ring on the towing chain was looped over this. When the digger arm was pulled near the vertical, the chain slipped off the open hook.



Example of an excavator operating in a crane configuration. (**Warning:** Quick hitches should have independent latching devices.)

Comments and Preventative Action

- It is essential not to use open hooks on digger arm buckets for lifting or towing.
- Lifting or towing points must form a closed eye and be certified and rated by a registered engineer or tested to NZS: 3404 after fitting by a competent person.
- Ensure that lifting or towing slings cannot become detached from the load.
- Fit an intrusion barrier to the rear window of any bulldozer used for towing.