



SAFETY ALERT

Uncontrolled free fall of a crane hook

INCIDENT

There have been two recent incidents at coal operations of crane operators inadvertently releasing the auxiliary hoist, sending the hook (100kg) into an uncontrolled free fall.

CIRCUMSTANCES

In the first incident the crane was being used to demobilise a demountable building using the main hoist and hook. The crane operator inadvertently released the auxiliary hoist, resulting in the auxiliary hook free falling and landing in close proximity to the dogman.

The second incident occurred when maintenance personnel were attempting to remove the engine from a large excavator using the main hoist and hook. Again the crane operator inadvertently released the auxiliary hoist, allowing the hook to free fall, landing in close proximity to those attempting to remove the engine. In both circumstances there were no injuries although there was significant injury/fatality potential.

INVESTIGATION

The investigation into both incidents revealed some common issues. Both cranes were of the same type (from the same manufacturer). Both cranes were fitted with free fall capabilities which could be easily and inadvertently activated. Each of the cranes failed to have fail-safe interlocking to prevent inadvertent activation.



Free fall main and auxiliary hoist controls are not positively interlocked or fail safe.



A 50 tonne crane set up to remove the engine from an excavator.



The final location of the auxiliary hook after an uncontrolled free fall into the working environment.



The final location of the auxiliary hook after uncontrolled free fall into the working environment.

RECOMMENDATIONS

1. Prior to the use of a crane at a mine site, inspect to see if the crane is fitted with free fall capabilities
2. Where a crane is fitted with such a feature ensure this feature is interlocked in a positive and fail-safe manner. Refer to AS 1418.1 – 2002 Cranes, Hoists and Winches – General Requirements, Clause 11.4.2 *Interlocking of controls*
3. Where such a feature is required during operation, ensure this gravitational hazard has been identified in the risk review and the appropriate controls put in place.
4. Where cranes were manufactured before the requirement to provide 'interlocking of controls', a review of the current controls is required to ensure they provide the equivalent level of safety to that required by the current Australian Standards.

NOTE: Please ensure all relevant people in your organisation receive a copy of this Safety Alert, and are informed of its content and recommendations. This Safety Alert should be processed in a systematic manner through the mine's information and communication process. It should also be placed on the mine's notice board.

Signed

Rob Regan
DIRECTOR
MINE SAFETY OPERATIONS BRANCH
NSW DEPARTMENT OF PRIMARY INDUSTRIES