



Mines Safety Bulletin No. 182

Subject: Competency of spotters for mobile load carrying equipment

Date: 22 February 2021

Background

Competent spotters are a well established control for reducing the risk of inadvertent impact by operators of mobile load carrying equipment. Spotters are required to have the necessary combination of skills, knowledge and experience (i.e. competency) to:

- recognise the hazards
- apply the appropriate actions in a given situation and set of circumstances.

Operators of mobile load carrying equipment always have one or more blind spots where they cannot exercise judgment to avoid impact. Spotters assist operators of cranes, elevating work platforms (EWPs) and other mobile load carrying equipment to not only avoid damaging equipment or plant, but also the potentially more devastating effects of:

- workers falling from heights
- objects falling from heights
- exposure of workers to the contents of pipes and tanks.

Over 130 incidents a year from more than 80 mine sites has highlighted that the competency requirements for a spotter are not well understood.



An operator was reversing a skid steer under the direction of a spotter when the back right side wheel went over an edge of shallow footing. With the momentum of reversing, the centre of gravity changed and skid steer tipped onto its side.

The role of the spotter is to:

- ensure that the crane, its lifted load, EWP or other mobile equipment operates within the limits defined in the task or plan
- stop the work at any time the task breaches its assigned limits
- maintain effective and immediate communication with the work team
- communicate with the mobile plant operator in a timely, clear and well understood manner.

Under all circumstances, the spotter must understand the limitations of the specific mobile plant so that timely directions are given.



While slewing a crane, the operator focused on the load and congested surroundings. A spotter instructed the crane operator to stop when he saw the boom was close to the acid line. By the time the crane operator ceased the movement, the boom had contacted and fractured the fibreglass acid line, resulting in acid spraying onto the crane.

Additional specific competencies include:

- directing a crane operator: the spotter must have a High Risk Work Licence (HRWL as defined in the Occupational Safety and Health Regulations 1996 and, in particular, Schedule 6.3) endorsed for a dogger.
- directing operations within a potential impact zone: the spotter must have a HRWL endorsed for a dogger.
- interacting with a 'lifted load': the spotter must have a HRWL endorsed for a dogger or rigger as appropriate to the level of interaction.
- directing the operator of a piece of mobile plant other than a crane: the spotter should be endorsed either as a dogger or an operator of the equipment such as an EWP. They must be competent to understand the way the equipment moves and its limitations.

Regulation 4.13 of the Mines Safety and Inspection Regulations 1995 requires that spotters are assessed and verified on site for the above competencies (known as VOC or verification of competency) and for the specific mobile plant being used.

Summary of hazard

Spotters not verified and assessed as competent for the specific equipment expose workers to:

- stored energy sources that may be present in a workplace including electrical, mechanical, radiation, heat and chemicals
- fall from heights
- falling objects and collapsing structures
- uncontrolled movement of equipment and plant and the resulting crushing injuries.

Contributory factors

- Tasks which are not adequately planned or resourced.
- Tasks where the relevant exclusion zones have not been calculated and marked.
- Tasks where the exclusion zones and risk points have not been clearly communicated and delineated for all parties to the lift.
- The failure to provide an appropriate number of competent spotters to constantly monitor hazards, such as impact points, power lines, etc.

Actions required

- Verify all spotters have the appropriate HRWL or operator's licence and practical experience for each type of mobile load carrying equipment being used.
- When directing a crane lifting a load the spotter must have a HRWL rated for dogger or rigger as appropriate for their interaction with the load.
- For all other mobile plant lifting loads or people or when in doubt, a spotter or safety observer is to have, as a minimum, a doggers HRWL or be trained as an operator of the equipment.
- Ensure spotters are informed of the lift plan, its specific limitations, zones, etc. and any unique hazards.

Further information

- Australian Standard AS 2550.5 – 2002: Cranes, hoist and winches – Safe Use Part 5: Mobile Cranes
- DMIRS, WorkSafe WA Guidance note – Powered mobile plant www.commerce.wa.gov.au/sites/default/files/atoms/files/guide-powered_mobile_plant.pdf ;
- SafeWork Australia, Guide for operating cranes and mobile plant near overhead electric lines www.safeworkaustralia.gov.au

This Mines Safety Bulletin was approved for release by the State Mining Engineer on 22 February 2021