



Crane toppling concerns Department of Labour

The Department of Labour is concerned at the ease with which an operator caused a crane to topple in Wellington late last year. The department's investigation holds lessons for all operators and owners and that even experienced operators might repeat the accident because its cause wasn't obvious at the time.

The 25-ton Kato all-terrain wheeled crane toppled on a Wellington construction site in November 2006. No one was injured in the accident. At the time it was lifting a 900 kilogram load from a truck at its rear and moving it to the crane's left side.

The department's investigation showed that the crane over-balanced because it was being operated with the outriggers down but retracted. It says this put the crane outside of its safe parameters. When the accident happened the crane had lifted a load at the rear. When it slewed around to suspend the load over its side, it exceeded the safe working radius and toppled.

Departmental safety inspectors say the outriggers were down but retracted because the work area was cramped. When the crane is operating with its outriggers fully retracted (as it was at the time) the safe working radius becomes elliptical. With outriggers retracted the safe working radius from the back of the crane was approx. 20m and



at the side of the crane it was reduced to 11m from the centre of the crane.

With retracted outriggers it's possible for a load to be lifted at the front or back of the crane within the safe working radius but when the crane is slewed the load can extend beyond the safe working radius as it exceeds the narrow sides of the ellipse.

Inspectors say the crane operator was unaware of the elliptical nature of the safe working radius and it became apparent during the investigation that other operators with many years experience were also unaware of this fact.

The crane's safety features include a mechanism to stop luffing or extending the boom in the event that the crane reaches the limit of its safe working radius.

Continues p.2

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Road user charges

Your association has met with officials from Land Transport New Zealand and we are now gathering additional data to supply to them in support of our all-terrain case.

We'll report the outcome in a future issue.

From the President

You will note a couple of different features in this month's newsletter – the Department of Labour asked us to publicise some details relating to an accident in Wellington in 2006. There is also an article on training done to a new Unit Standard for rescuing people on tower cranes. Many will remember the demonstration done at the Wellington conference in 2004 and thanks must be extended to Mark Clayton from Fletcher Construction for having stuck with this project. We consider that it can only be of benefit to the industry.

The response to registrations for conference has started pretty well with 70 people registered and over 40 rooms booked at the hotel. We are sure there will be items of interest for all. At the time of publishing this newsletter there were only 15 seats available on the train trip to Greymouth and return.

R Carden, President

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Crane toppling - from p1.

However, this model of crane does not disable the slewing function in the event that the crane reaches the limit of its safe working radius.

Lessons to be learned

- Elliptical nature of safe working radius when working with outriggers retracted and down.
- Ability to continue slewing outside of safe working radius on some models of crane (some newer model cranes have a safety function that disables slewing).

Fact sheet

Crane: 25-ton Kato all-terrain wheeled crane.

Load: partial pallet of gibboard (20 sheets) from a delivery truck, 900kg.

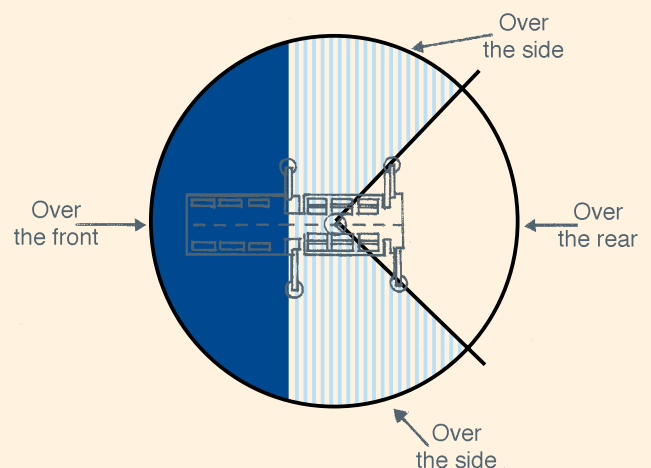
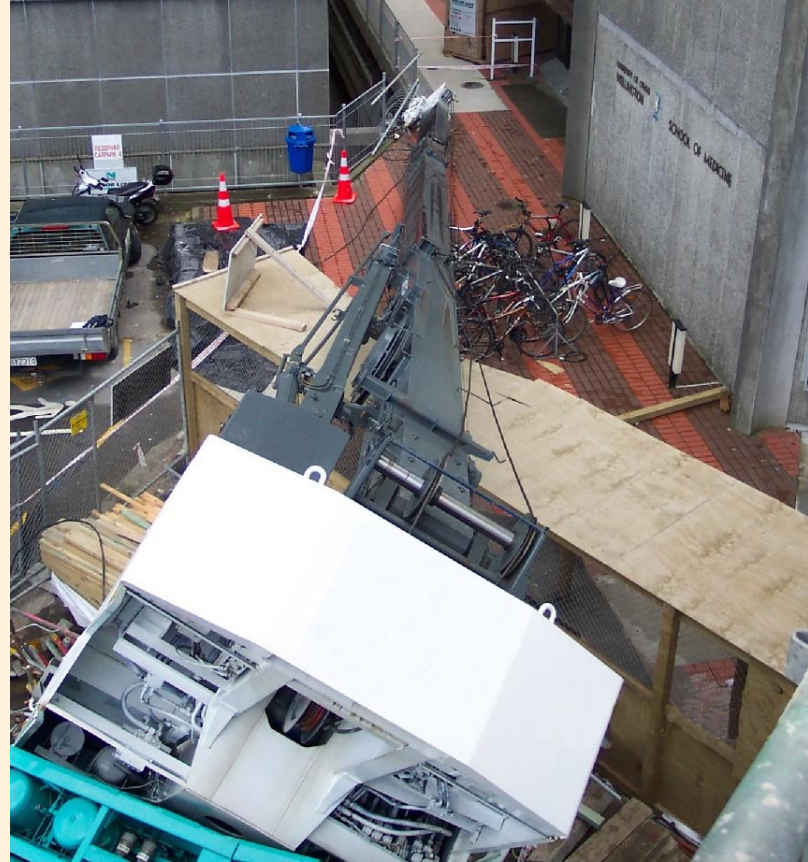
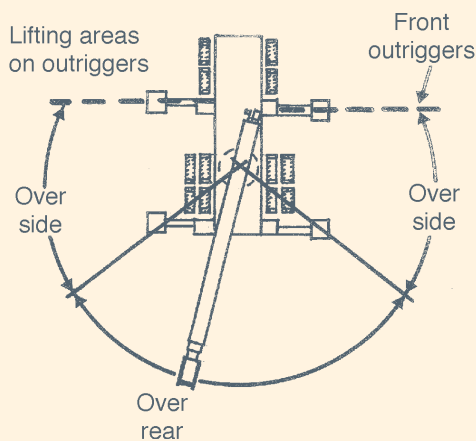
Working circle: Uplifting 8 - 9 metres directly behind crane centre line to the crane's left-hand side (approx. 260). 12-13m from centre line.

Reach: Boom extended to 19m, using 3-ton hook.

Typical mobile crane areas of operation

An important and often overlooked portion of a crane rating chart is the lifting area diagram.

It defines the permissible lifting areas as arcs or quadrants. Working areas for cranes are normally defined as 'over front', 'over side', 'over rear' or '360°' (full circle). Permissible loads shown on crane capacity charts will vary from lifting quadrant to lifting quadrant.



The operator must ensure capacity ratings are not exceeded no matter what quadrant he is operating in, or when slewing from one quadrant to another. If in doubt, check the Association's safety manual which explains the issue in full detail. Note: the above is only a guide and all cranes have different rating charts and different operating areas.

New rules

The revised draft set of rules should be available from the Association lawyers this week and they'll be sent to members for information. The rules will then be debated at the annual general meeting on 13 July. Once agreement on them is reached the rules will be filed with the companies office.

Crane register

Amendments to the crane register have closed. The document is now with the printer for publishing. Don't forget that full details of all cranes are shown on the website and this can be amended very quickly. Members should advise of changes to ensure that the most up-to-date information is available.

New association members

We welcome the following new members to the Association:

Full	Jacksons Cranes & Heavy Haulage Ltd, Timaru
	Ewing Construction Ltd, Christchurch
Associate	Utilitech Training Center, Auckland

Cancellation of membership

The following company has cancelled its membership:
Snorkel Elevating Work Platforms

New training course a great success

A recent three-day crane rescue course has captured the imagination of those who took part and set a high standard for the courses that will follow.

Opportunity Training - the Training Organisation appointed Vertical Horizonz Industry Training Group to assist and then implement the New Unit 23351 Crane Rescue Course into the industry. The group worked closely with Mark Clayton and Opportunity Training to develop and then provide a 3-day training package.

They held the first course from 19 – 21 March this year at Hawkins Construction plant yard, Wiri, Auckland.

Tim Jones, Engineering Manager, wanted to ensure the crane crew were trained prior to the commencement of a new project, Ascot Office Development in Greenlane, Auckland. The

course objectives require one day of theoretical assessment followed by two days of practical application to teach methods and techniques of crane rescue. The trainees went through a number of different scenarios designed to challenge them to think "outside the square". The training forced them to improvise and adapt when confronted by realistic training situations. It seems it was a couple of days of action, rather than theory.

The Hawkins employees certainly impressed the Vertical Horizonz

Group with the way they conducted themselves. Trainers say the Hawkins group attacked the tests with great enthusiasm and displayed good initiative when challenged to conduct a crane rescue. And the response from the trainees was really positive. Hawkins Construction plant yard manager, David Wright says he thought the course content, both on theory and practical sections was well-aimed at achieving the required skills.

"It was great to be on the first Crane Rescue Course, everyone was very enthusiastic and focused throughout the three days," he says.

"Imagine what it would feel like falling and arresting in a harness at six times their body weight. Scary stuff."

"With suitable refresher training I'm confident our crew will be able to carry out a rescue should such a situation arise. But it's one of those hard-earned skills you hope they'll never need to use," he says.

The project safety/quality manager, Peter

Kiely, says he came away from the training with a new perspective on rescue at heights.

"I've had to reconsider many of my earlier, preconceived ideas about the skills and equipment necessary to conduct an effective rescue at height," he says. The crane crew told Peter that it was great to gain an understanding of reality, actually being suspended in a harness and rescued. He says they told him their bodies were sore the day after the training.

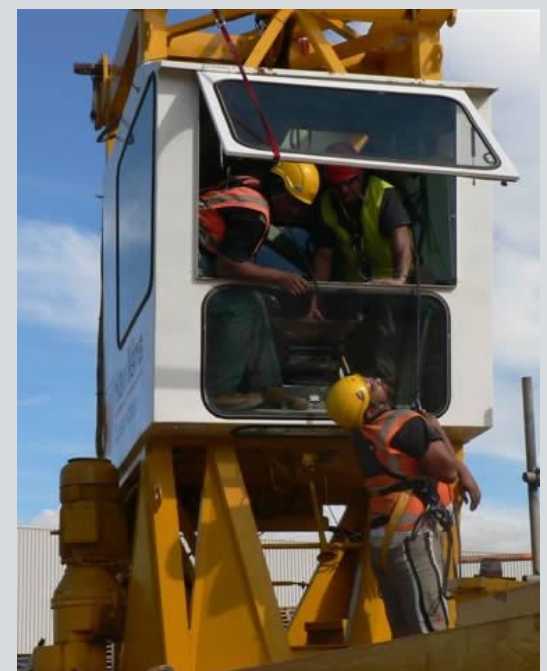
James Alden of Wesfarmers Industrial & Safety observes trainees carrying out rescue procedures utilising company rescue equipment systems



VHITG Instructors & Hawkins Employees group at the successful completion of the first New Unit 23351 Crane Rescue Recovery Course



Robert Tusa uses rescue techniques on Chris Clarke during rescue procedures from the crane cab.



Opportunity

Acknowledgements

Ian Grooby - Chief Executive Opportunity – The Training Organization
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