



Workers Killed During Maintenance of Cargo-Container Spreader and Expandable Lifting Frame



What Happened

► Incident #1

A crane operator functioning as a mechanic was killed when his head was crushed between structural beams of an intermodal cargo-container spreader as it was being closed during the lubrication of the guide rails.

► Incident #2

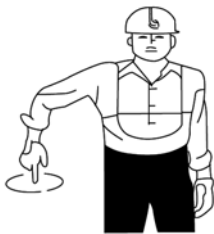



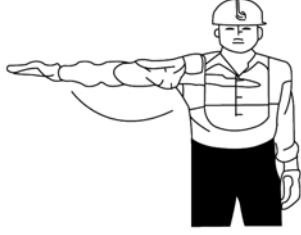

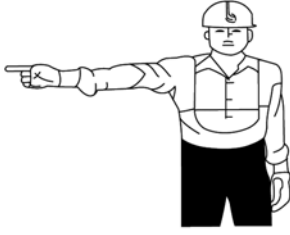

A yard supervisor was standing on a 6-foot ladder to check a lifting frame for hydraulic leaks when his torso was crushed between the frame and the moving mechanism.

What Can Be Done to Prevent This from Happening Again

- ✓ De-energize, lock out, and tag spreader or lifting frame prior to inspection or maintenance.
- ✓ Develop and follow standard operating procedures that prevent contact with spreader or lifting frame components that move when energized.
- ✓ Maintain clear communication with each other at all times.
- ✓ Use standard hand signals (see below) when radio communication systems are not functioning.
- ✓ Acknowledge each signal received before acting on the signal.
- ✓ Attend training on safe work practices for working with cargo-container spreaders and lifting frames.



Standard Hand Signals for Controlling Container Cranes

 <p>LOWER. With arm extended downward, forefinger pointing down, move hand in small horizontal circles.</p>	 <p>ALL CLEAR. With arm extended over head, palm down, move hand forward and backward, repeat 2-3 times.</p>	 <p>UP EASY. With arm vertical, repeatedly open and close fingers and thumb, touching fingertips and thumb tip when closed.</p>	 <p>HOIST. With arm vertical, forefinger pointing up, move hand in small horizontal circles.</p>
 <p>STOP. Right arm across chest then fully extended with palm down.</p>	 <p>DOWN EASY. With arm extended downward, forefinger pointing down, move hand in small slow circles, place opposite hand palm up motionless under hand giving motion signal.</p>	 <p>MOVE SPREADER/HOOK IN THE DIRECTION INDICATED. With arm fully extended, point with finger in desired direction of movement.</p>	 <p>GANTRY CRANE RIGHT/LEFT. Roll hands over each other in the desired direction of travel.</p>

Source: ASME B30.24-2008 "Container Cranes" – Used with permission; all rights reserved.

See back for resources.



Resources for Employers

- ▶ *Job Hazard Analysis* – Available at www.osha.gov/Publications/osha3071.pdf.
- ▶ *Lockout/Tagout* – Visit OSHA Safety and Health Topics Web page on Control of Hazardous Energy (Lockout/Tagout) at: www.osha.gov/SLTC/controlhazardousenergy/index.html.
- ▶ American Society of Mechanical Engineers (ASME) B30.24-2008 "Container Cranes" – Phone: (800) 843-2763. Web site: http://catalog.asme.org/Codes/PrintBook/B3024_Container_Cranes.cfm.
- ▶ Free occupational safety and health on-site consultation from the NJ Department of Labor & Workforce Development – Phone: (800) 397-3346. Web site: <http://lwd.dol.state.nj.us/labor>.



The New Jersey Department of Health & Senior Services, in conjunction with the National Institute for Occupational Safety and Health (NIOSH), is currently conducting a research study of fatal work-related injuries. This project, known as FACE (Fatality Assessment and Control Evaluation), seeks to identify the factors that contribute to work-related injuries. The FACE study will help in the development and use of improved safety measures for preventing injuries.

This bulletin is also available on the FACE Web site at nj.gov/health/surv/face. If you have any comments or questions, or need additional copies of this bulletin, please contact the FACE Project Coordinator or via e-mail at surveillance@doh.state.nj.us or by calling (609) 826-4920.