

Pedestrian hazards around overhead cranes and forklifts

New **FOREWARNER-LED** warning lights from **HEYTRAILLER** significantly improve awareness of pedestrians who work close to heavy and dangerous equipment.

Industrial plants have forklifts, heavy equipment, personal carriers and overhead cranes busily working with operators of these machines concentrating mainly on the load being handled and their job at hand. Operators are frequently multitasking and in a hurry to complete their material handling task. Pedestrian workers are also busy doing their job in the same proximity as these material handling machines---major safety hazards in play.

AUDIBLE ALARMS ARE LIMITED

Audible beeping alarms are fine and have been used successfully for many decades. However audible alarms are frequently “drowned out” and ignored as workers get used to the sound especially in loud industrial settings. Today there is also more widespread use of worker ear plugs mandated by corporate safety to protect the worker. This problem with audible alarms is exacerbated when there are multiple lifts and cranes working simultaneously in the same area.

FOREWARNER lights do not take the place of audible alarms, but do provide additional visual warning that is proportional to the proximity of the moving equipment hazard. Typically moving equipment do not have beeping audible alarms when the vehicle is moving in the forward direction—only sounding in reverse. **FOREWARNER** lights can be installed facing both forward and backwards ---warning pedestrians of the movement of the machine in both directions. Since the lights are available in both red and blue, users choose one color for each direction. Sometimes clients will also leave the forward light on continuously when the forklift ignition is on and then only switch the rear facing light on when the vehicle is in reverse. The idea is simply to increase pedestrian awareness as to the proximity of the moving machine.

An audible beeping reverse alarm serves more as a general caution to employees working in the area, however this still requires workers to identify the hazard and assess whether its proximity is dangerous. Unlike an audible “beep”---the actual movement of a light on the floor from a forklift or overhead crane provides a definitive warning to affected pedestrian employees — those in the immediate danger area.

FOREWARNER LED lights are specifically designed for both forklifts and overhead cranes and are available in spot, line, laser and arrow designs projected on the floor below.

FORKLIFT – PEDESTRIAN ISSUES

- Forklifts have large radius rear end swing — heavy — large mass.
- Forklifts run into pedestrians — who are NOT paying attention.
- Forklifts can crush pedestrians against walls—racks—machinery
- Forklifts can run over feet — because workers are too close.
- Pedestrian workers should not get too close---stay outside the “danger zone”
- Corners — blind intersections create forklift—worker proximity.
- Workers can try to “squeeze by” forklifts and can get seriously hurt.
- Forklift drivers concentrate on the load and may NOT see workers.
- Workers are concentrating on their job at hand and may NOT see the forklift



Why FOREWARNER LED lights improve safety on forklifts:

- Reduce accidents!! 40+% of all fatal forklift accidents involve pedestrians.
- Pedestrian sees projected line or spot on floor —knows to stay outside of that perimeter.
- Very effective for forklifts working in areas with many pedestrians.
- Pedestrian workers can get “immune” to the beeping sound of reversing forklifts
- Beeping audible alarms do NOT provide a pedestrian with a sense of proximity to the forklift
- Many pedestrians don't understand the crushing force of a forklift tire or rear end swing.
- Conventional loaded warehouse forklift weighs over 12,000# high mass and poor stopping distance
- Creates a visible “**SAFE ZONE**” border — obvious to pedestrians to stand and walk clear.



OVERHEAD CRANE- PEDESTRIAN ISSUES

- Operators control overhead cranes from a cab far above the floor or a pendant from operator on the floor
- Crane operators control 3 axis of movement: Hook + load: Up/down, Crane movement: side/side + front/back
- When a load on a crane is stopped suddenly, there is significant hook/load sway
- Pedestrian workers are frequently working in close proximity to crane handling operations
- Crane operators concentrate on the load they are handling and may NOT see workers.
- Workers are concentrating on their job at hand and may NOT see the moving load in their area.
- 90% of crane accidents occur due to human error---either by operator or by pedestrian
- 40% the victims were struck by an object (such as an uncontrolled hoisted load or crane part)
- 50% of U.S. crane accidents that had injuries in 2009 resulted in fatalities



Why FOREWARNER MAXI lights improve safety on overhead cranes:

- Reduce accidents!! 80 lift and material handling equipment workers are killed each year, on average
- Reduce incidences of human error----pedestrians are more aware of moving load
- Pedestrian sees projected line or spot on floor —knows his proximity to the moving load
- Very effective for overhead cranes working in areas with many pedestrians.
- Pedestrian workers can get “immune” to the beeping sound of overhead cranes in use
- Beeping audible alarms do NOT provide a pedestrian with a sense of proximity to the load on the crane
- Crane operators have a new “frame of reference” as to the exact position of load/hook above the floor
- Significantly improves operator control of the load, especially when exact positioning is required.
- Operators do not have to take their eyes off the crane block or load to know trolley is centered over the load.
- LED lines can create a square “box” around the load/hook on floor below---obvious “danger area”
- Pedestrian worker sees colored line or spot on the floor---knows load is moving and his proximity to it
- Snap on lens cover turns spot on the floor into line on the floor---allows user to “box” in the hook.
- Moving lines/spot on the floor prevents pedestrians from walking under suspended load.
- Powerful 24 LED 120 watt light projects spot or line (with snap on lens cover)

SIDELIGHTS ON FORKLIFTS – PEDESTRIAN ISSUES

- Pedestrians sometimes get too close to working forklifts---very dangerous!
- Solid tire cushion forklift tire will easily crush a foot---leading to a permanent disability
- Ensure pedestrians stay clear of “danger zone” area projected on floor around the forklift
- Many times pedestrian workers are to the side of the forklift---and do not see LED light in front or back
- **FOREWARNER SIDELINERS** are available in both 6 LED and laser versions.
- Green light is more visible in high light conditions angle of **SIDELINER** determines distance from forklift



CONCLUSION:

FOREWARNER type equipment safety lights create significantly more pedestrian awareness of both forklift and overhead crane movement. Lights create a culture of safety awareness by preventing both operators and walking employees from being in the wrong place at the wrong time thus minimizing the potential of a preventable accident.

<http://www.keytroller.com/FOREWARNER-Blue-or-red-LED-Warning-Spotlight.html>

KEYTROLLER
CREATING A CULTURE OF SAFETY

813-877-4500

sales@keytroller.com

www.keytroller.com