

# Truck Driver Jostling Injury Investigation at Container Port Expert Article

Equipment operators at maritime container ports require site and equipment specific instructional training per OSHA regulation. They are also subject to operational awareness of truck drivers and pedestrians in the working area or strike zone. Crane and PIT operators need to be constantly aware of blind zone hazards while loading and unloading containers at maritime port facilities. This article looks through the lens of a specific jostling incident to a truck driver at a container port, and discussion of some of the standards and safety features intended to protect drivers during container unloading via industrial trucks and cranes.



According to the Occupational Safety and Health Administration (OSHA), truck driver jostling incidents are a serious injury and fatality (SIF) potential at maritime container terminals. As heavy equipment (marine cranes, rubber tired gantry, top handlers, side picks) unload containers from trucks, drivers need to remain alert and safely buckled into the cab. During contact with the container by a lifting device, there is a possibility of inadvertent hoisting of the truck and trailer (chassis), along with a shipping container. Complicating this issue for truck drivers is the fast-paced work conducted at any time of the day or night, and often performed in inclement weather. Upon arrival to a container port and prior to unloading, semi-tractor trailer drivers must exercise extreme caution to ensure full inspection of the container twist lock devices (“PINS”), to ensure they are fully unlocked and not bound or restricted.



Corner Twist Lock Device, Photo Courtesy Container Sales Group

Shipping container (aka “Cans or Boxes”) Twist Locks secure boxes to the trailer during highway transport and in other modes. Container twist locks work by a fastening device at each of the four (4) structural corner posts of the container, and then secures it to the chassis frame or trailer.

**DANGER:** Locked, bound, or obstructed Twist Lock Devices are a significant safety hazard

Drivers frequently attach nylon zip cable ties, wire or other forms of securement to prevent displacement of a shipping container during transport.



While sitting in the cab at the port during the onloading procedure, drivers need to be aware that their equipment (semi-tractor trailer) can be inadvertently hoisted aloft together with the container by the crane or PIT.



Photos Courtesy ILA-USMX OSH Circulars 2017

In order to preclude hoisting injury to truck drivers a protective rule for equipment and crane operators requires them to “Float The Load.” This is to ensure clear separation of the container from the (tractor’s) chassis or bomb cart, before lifting the unit off the chassis.



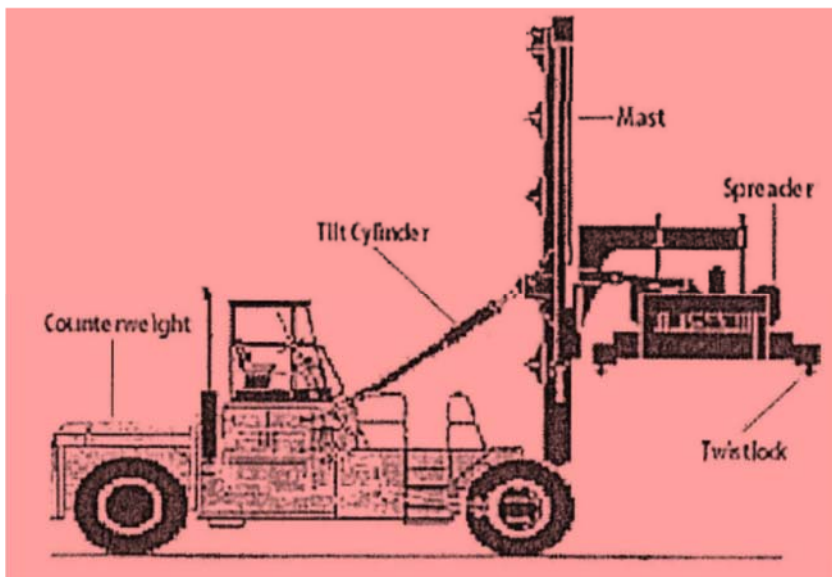
Floating the Load, Photo Courtesy Longshore Safety Tip (ILWU/PMA 2008)

## Truck Driver Jostling Injury Expert Investigation

In the summer of 2022, a truck driver arrived at the maritime shipping port to deliver an intermodal container. As the truck driver lined up in the terminal queue with other trucks and trailers, a posted sign instructs drivers to “Stop Here Unlock Pins.”



Unpinning of the container is both a mechanical and safety requirement in order to expedite safe unloading by the terminal equipment operators. The subject container in this incident was 40 feet long and positioned on a chassis, a special trailer designed to carry intermodal shipping containers. A heavy duty Top Handler was involved in the incident, which is a type of powered industrial truck (PIT) with a forward reaching mast and spreader system, designed to hoist and stack heavy shipping containers on and off trucks.



Top Handler, Graphic Courtesy Pacific Maritime Association (PMA)

On the night of the incident as the truck driver passed through the entry queue and documentation procedure, during inspection of the container the truck driver failed to identify and remove a secured nylon zip tie. The zip tie was wrapped around one of the twist locks.

As the Top Handler operator approached the loaded truck and trailer, he lowered the heavy spreader beam onto the container's top, and immediately powered up the unit. While failing to float the load, he inadvertently lifted both the container, truck and chassis aloft.

The truck driver had been to the site previously, although this time failed to ensure his seat belt was connected, and did not have on a hardhat. During the lift, he was violently jostled and fell to the floor of the tractor cab, sustaining serious head injury. During the post incident inspection, a nylon zip tie was discovered still attached to one of the outside twist lock devices on the chassis.

## Incident Investigation

Investigation revealed that the driver failed to identify and remove a nylon zip tie from one of the twist locks. In addition, the victim's fall and associated injuries were directly related to his failure to use a seat belt, and to wear a hard hat.



Analysis of an onsite video clip of the incident discovered that the Top Handler operator failed to float the load, or to verify safe separation of the container from tractor-trailer (chassis). Due to operator negligence the load was abruptly hoisted raising the entire unit off the ground, then forcefully returned to the pavement, seriously injuring the truck driver. The operator's unsafe action was a violation of established safety rules, and deemed to be the principal cause of injury.

## Findings from our Expert Witness Investigation

In review of post incident video content from onsite security cameras, prior to hoisting, the PIT operator did not check the chassis and its twist locks. Additionally, there were no external wireless or digital cameras mounted on the Top Handler mast or spreader. Cameras can be attached to the elevating mast or spreader mechanism to assist operators in identifying ground personnel, obstructions, oncoming vehicles and more.



Frame mounted camera on equipment (Photo Courtesy HoistCam by Netarus)

Following a thorough forensic investigation, our experts concluded that the PIT operator failed to meet industry standards by performing an unsafe act and failing to follow established safety rules. The truck driver also neglected to identify an obstructed twist lock, and to remove a zip tie. He also failed to wear approved head protection (PPE), and to use his seat belt.

The hazard of obstructed twist locks was well known at the terminal, and had been previously reported by an independent inspection consultant hired by the facility owners. The operator of the powered industrial truck (PIT) knowingly failed to ensure the safety of truck drivers, and violated applicable minimum safety standards causing the injury incident.



Consequentially, the primary cause of injury was the Top Handler's unsafe act, which violated applicable standards and established trade safety rules. Responsibility for inspection of the chassis and container upon entry was the domain of the truck driver, who failed to take corrective action to remove a physical obstruction from a twist lock devise.

## Forensic Casework Involving Maritime Container Handling

Port Safety Services by SAFETRAN has the experience and in-house expertise to investigate a broad range of issues involving material handling and hoisting injury and wrongful death. Our experts have investigated cases involving forklift and trucking injury, mechanical equipment explosions, toxic and hazardous materials that injure and impact life safety of workers involved in maritime shipping operations.

Call us at 510.894.0229 to determine which of our experts is best suited to investigate the technical issues specific to your case.

### Featured Expert

Daniel J. O'Connell, CSP, CHMM is a Board Certified Safety Professional with previous experience as a longshoreman, crane operator, and teamster. He has extensive firsthand experience as a safety consultant and instructor of material handling equipment operators for over three decades.

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Date

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## Select equipment and standards for maritime safety and health:

HoistCam, d yable wireless camera system for material handling, by Netarus, LLC, <https://hoistcam.com/>

PART 1915—OCCUPATIONAL SAFETY AND HEALTH STANDARDS FOR SHIPYARD EMPLOYMENT

OSHA 29 CFR 1915 Subparts A, B, C, D, H, P and Z

California General Industry Safety Orders, Article 14. Marine Terminal Operations

The International Marine Contractors Association (IMCA) IMCA SEL 019, IMCA M 187

NFPA 306, Standard for the Control of Gas Hazards on Vessels

NFPA Certificated Marine Chemist Program