

## Safety on the Loading Dock

### *A look at hazards and how to mitigate them*

Loading docks are one of the nation's key points of commerce – and perhaps one of its most unsung. In 2018, this part of the Indian freight network handled a large amount of freight. That same year, a large number of people missed work because of injuries and illnesses incurred on loading docks, dock plates and ramps. So, how can employers keep loading dock workers safe?

### **Help drive safety**

Collisions and back-overs are an ever-present danger at loading docks, where vehicles are entering and exiting. Help prevent these risks by posting “flow of traffic markings” and enforcing speed limits. Some other recommendations include painting the edges of loading docks, staging areas and loading/ unloading areas to enhance visibility, and installing a system of lights to communicate to drivers.

For example, a green light can indicate it's safe to back into a loading bay, while a red light would imply it's unsafe or the bay isn't ready for use.

Once at the bay, drivers should shut off their engine and engage their brakes. This can lessen the chances of two loading dock issues:

**Drive-aways:** These occur when a vehicle operator pulls away from a dock while workers or forklift operators are inside or near a trailer.

**Trailer creep:** When a truck trailer slowly inches away from a dock, it creates a gap that workers or forklifts may fall through. This gap is typically created by the force of a forklift or other heavy equipment moving in and out of a trailer.

One way to prevent drive-aways, is requiring drivers to check in and stay in a designated area or waiting room while their trailer is loaded or unloaded. This keeps drivers from accessing prohibited areas of the facility or areas where they could get hit by another vehicle or piece of heavy equipment.

To protect against trailer creep, experts recommend the use of wheel chocks or vehicle restraints to keep the trailer secure against the dock. In addition, worn or defective trailer landing gear, designed to keep trailers level and secure when not attached to a vehicle, can present a significant hazard. If one or more legs falter, the trailer could tip and injure or kill anyone inside, especially operators of forklifts or other powered industrial trucks.

One approach to prevent this is to keep the trailer coupled to its vehicle, or tractor. Employers can implement a number of safety strategies to help prevent injuries.

### Key points

- Employers should develop traffic control plans for inside and outside a facility. They should also take steps to help prevent drive aways and “trailer creep,” which occurs when a trailer moves away from the dock door or opening, creating a gap that workers or equipment can fall through.
- Dock edges should be marked with visual warnings so workers and equipment don’t fall off. Guardrails, visual barriers or other safety measures can help protect workers and forklift operators from falling off docks.
- Ergonomics, chemicals, lighting and ventilation are some of the safety and health concerns for workers who transport items in or out of trailers.

If a trailer isn’t attached to a tractor, it is advised using an added support, such as a trailer prop or fixed jacks, to support the landing gear. It is recommended that the landing gear should be inspected before loading or unloading begins, adding: “If there are any concerns as to safety, do not proceed.”

### Start at the dock door

At dock doors, a seal or shelter will help keep the effects of weather, such as slippery walking surfaces caused by rain or snow, from impacting workers. “Generally, the more adjustable the canopy, the better the fit,”

IOSH and FTA’s safety guide states. “However, adjustable systems generally require more maintenance and may be more prone to damage.” Dock plates, dock-boards and dock levelers are designed to bridge the gap between the trailer and the dock to ensure workers and forklifts can safely load or unload trailers.

Problems can arise, however, if these items are unable to support the weight of moving equipment, materials and people, or if they aren’t properly maintained. It is recommended that employers should make sure dock plates and levelers are stable and properly placed, and that loads don’t exceed their weight capacity.

The Material Handling Institute – a material handling and logistics association representing warehouse racking manufacturers – says that dock levelers, for example, typically have a capacity between 25,000 and 80,000 pounds, but other factors should be taken into account, including:

- The heaviest load that workers will move
- The weight of the heaviest forklift or material handling equipment, including attachments
- Whether a powered industrial truck has three or four wheels
- The size of a powered industrial truck’s tires
- Number of loads per shift or per day

The OSHA 1910.28 standard requires the use of fall protection devices such as a guardrail system, a safety net or personal fall protection systems if an employee could fall 4 feet or more from an open or exposed dock door or opening.

For dock platforms lower than 4 feet, it's still recommended to have a visual barrier with a prominently visible color or some other protection. "It is always advisable to go above and beyond the regulations, as long as it doesn't create additional hazards or concerns," . "A good rule of thumb is to guard any fall edge where a forklift could drive off or a person could slip, trip or fall, leading to an injury or possibly death." In a pocket guide on warehousing safety, OSHA advises employers to place visual warnings near dock edges.

Forklift drivers should use extra caution when driving or backing up near drop-offs. "Dock edges are one of the most economical, least difficult areas of a facility to protect," it is said, "so it's best to err on the side of caution. Most of the dock gates and rails that are available are easy to install, require little maintenance, easy to operate and economical to purchase."

### **Take control of traffic**

Inside facilities, workers on foot – combined with moving forklifts and other material handling machinery – can create hazards, with collisions among the more major issues. It is advised: Assemble a cross-functional forklift safety team that will conduct risk assessments of high traffic areas and then implement actionable solutions. Workers on foot should wear reflective clothing. Meanwhile, powered industrial truck operators should:

- Inspect the machinery before use.
- Keep forks low to the ground to maintain 360-degree visibility during use.
- Make sure loads are stable and secure.
- Never carry loads that exceed the equipment's weight capacity.

Employers should:

- Create a floor marking system – either with paint or tape – that includes crosswalks and marked zones where forklifts and workers are likely to interact or cross paths.
- Ensure forklift operators are properly trained and all workers complete awareness training.
- Keep people away from forklifts as much as possible.
- Post clearly visible speed limits around the facility.
- Lower the maximum speed on a forklift by installing a speed limiter.
- Use other "automated controls" such as warning sensors, automated gates, backup sensors, cameras and proximity detection devices.
- Install safety gates, guardrails, bollards or other barriers.

## Help workers stay safe

Ergonomics is a significant concern. OSHA advises the use of powered equipment whenever possible instead of having workers perform manual lifts. The agency also recommends employers reduce the number of lifts workers make from shoulder height and floor height by repositioning the shelf or bin. Along with providing task-oriented training on ergonomics, employers should make sure floors are kept clean and free of slip and trip hazards, and overhead lighting is adequate for the work required.

If workers are transporting items that contain chemicals – hazardous or otherwise, employers should make sure the task is done in a well-ventilated area, with the use of vented hoods or local exhaust systems as needed. Proper ventilation is important for another reason, It is said because workers or forklift operators may be exposed to carbon monoxide from trucks or forklifts. Before unloading a trailer, waybills should be reviewed to make sure any product onboard won't pose a hazard if it leaks. OSHA states that Safety Data Sheets should be maintained for every chemical workers may be exposed to, and that workers should follow SDS instructions for handling chemicals. The agency also advises storing any chemicals away from forklift traffic areas. Employers also need a written spill control plan. They should provide clean up kits "in any area where chemicals are stored," and workers should have the proper personal protective equipment when needed. A good rule of thumb is to guard any fall edge where a forklift could drive off or a person could slip, trip or fall, leading to an injury or possibly death.

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