

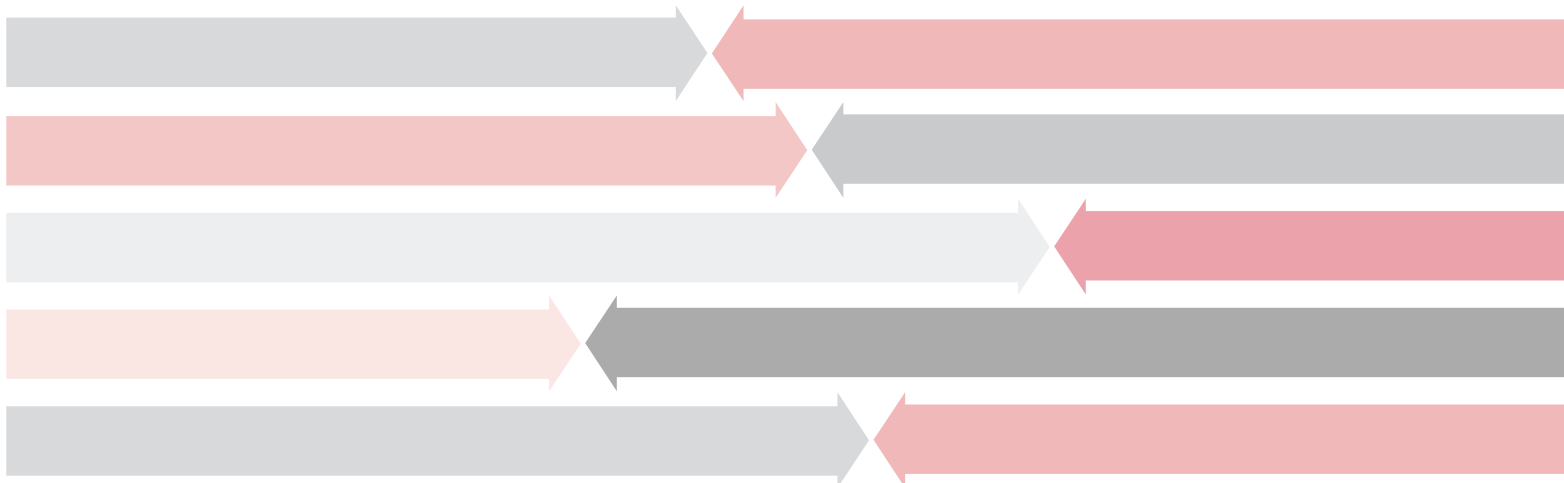


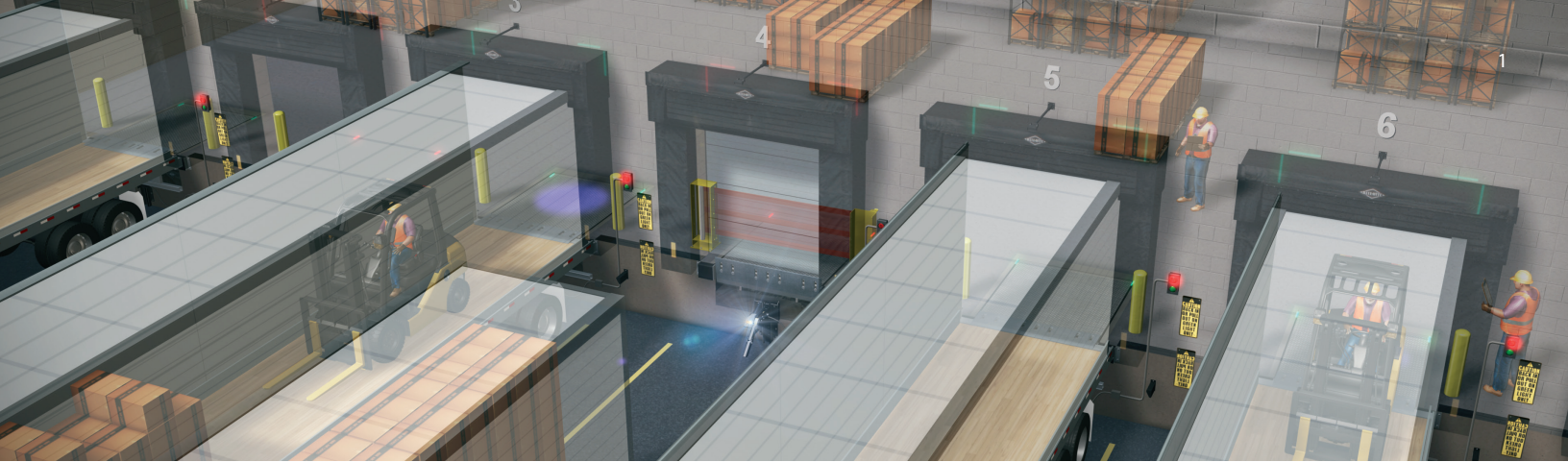
## HAZARD RECOGNITION AND CONTROL

A Systematic Approach to Identifying and Reducing Loading Dock Hazards

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If you're a facilities manager or work on a loading dock, you understand that danger lurks around every corner – inside and outside the building. Whether it's trucks entering the drive approach, or material handlers loading and unloading trailers, a busy loading dock poses a number of threats to workers.

The danger of serious injury or death to loading dock personnel is a sobering reality for companies today. Recent news reports like these below serve as a tragic reminder of what's at stake.

#### THE ASSOCIATED PRESS – JANUARY 24, 2017

Authorities in Las Vegas say the death of a 44-year-old man who was fatally injured when he was struck by a tractor-trailer in a grocery store loading dock was an accident. The Clark County coroner reported Tuesday that the man died of multiple injuries before his body was found.

#### THE ASSOCIATED PRESS – JANUARY 25, 2017

A 51-year-old man was killed when he fell between a loading dock and a tractor trailer as the vehicle pulled away from the dock and a forklift then fell on him, law enforcement officials told the Associated Press.

Statistics from organizations like the Occupational Safety and Health Administration (OSHA) and the Industrial Truck Association also paint a picture of the dangers lurking at the dock. According to a recent study, forklift accidents result in 34,900 serious injuries every year and close to 100 fatalities. Furthermore, The National Safety Council reports that forklift accidents cost employers an average

of \$48,000 per single work-related injury and \$1,390,000 per death. That's more than \$1.8 billion spent on forklift related injuries and deaths on an annual basis.

Unfortunately, tragic stories and statistics like these are far too common. However, they are often preventable with the right training, processes and systems in place. The first step to protecting workers is identifying potential hazards that exist in and around your loading dock. That starts by addressing pedestrian safety.

## PEDESTRIAN & FORKLIFT SAFETY

Do you have people on the drive approach as semi-trailers enter and exit the loading dock area? The lack of visibility by drivers, combined with ambient noise masking the sound of trucks backing up, can

### DIRECT AND INDIRECT COSTS

INSURED COSTS	INVESTIGATION TIME	NEW EMPLOYEE COMPENSATION
CORRECTIVE ACTION	WORKERS COMPENSATION CLAIMS	EQUIPMENT REPAIR
UNINSURED COSTS	RETRAINING	LOST PRODUCTION

" Indirect costs of injuries may be 20 times the direct costs<sup>1</sup> "

" The true cost of an accident is often underestimated<sup>2</sup> "

<sup>1</sup> American Society of Safety Engineers  
<sup>2</sup> OSHA, Safety and Health Management eTool

result in pedestrians being pinned or crushed on the approach. Pedestrian hazards also exist inside your building. Many of these accidents occur when dockworkers are in the path of a forklift that is entering or exiting a trailer. According to the National Institute for Occupational Safety and Health (NIOSH), close to 20 percent of all forklift accidents involve a pedestrian being struck by the forklift. That translates to almost 19,000 people per year.

There are a wide variety of factors contributing to pedestrian hazards, including: noise, limited visibility, heavy equipment, operator error, lack of communication and a push for productivity. The best way to mitigate these factors is to implement a multi-layered protection system. Using advanced technology to continuously monitor the inside and outside of the loading dock while providing visual and audible alarms to warn of potential danger is key. Rite-Hite has been partnering with companies for years to identify potential hazards and develop solutions that protect workers, equipment and the bottom-line.

## RITE-VU™ HAZARD RECOGNITION AND CONTROL

The Rite-Vu Hazard Recognition and Control system is the direct result of Rite-Hite's collaboration with customers and industry professionals. The system is designed to help protect workers on and off forklifts, inside and outside the loading dock area. It takes a systematic approach to loading dock safety, protecting workers in several important ways.

**Approach-Vu™** – Safety begins on the drive approach when a truck driver is backing up into a loading dock bay. Approach-Vu uses motion sensors mounted above the loading dock shelter to continuously monitor for trucks. When a truck is detected, an audible warning sounds and a bright light illuminates in a pedestrian's line of site. The combination of audible and visual warning helps reduce the risk of pedestrians being struck on the drive approach.



**Pedestrian-Vu™** – When a material handler is working inside a trailer, it is critical for pedestrians and other material handling equipment to stay clear of the door opening. Pedestrian-Vu uses motion sensor technology to alert dockworkers of activity inside a trailer, helping to keep them out of harm's way. Sensors are placed on each side of the dock door and detect when a pedestrian or material handling equipment enters the trailer. When this happens, a bright blue light is projected on to the leveler signaling that there is activity inside the trailer and warning people to stay clear. If the trailer is secured using a Dok-Lok® vehicle restraint, it cannot be disengaged while someone is detected inside the trailer. Furthermore, if someone enters an unsecured trailer, an audible alarm is prompted.





**Corner-Vu™** – With the Corner-Vu system, loading dock personnel will no longer have to guess whether or not a trailer is secured at the loading dock. Bright lights mounted on the inside top corners of the loading dock door indicate whether or not a trailer is properly secured. Green lights mean a trailer is safely secured and ready to enter, while red lights caution workers to stay clear. Visual status is also displayed on the Dok-Commander control system (lights and video display).

**Leveler-Vu™** – This system provides material handling operators with a visual reference as they back out of a trailer. Green lights indicate that the trailer is properly secured to the loading dock, while red lights caution to stay clear. The high-intensity lights are mounted to the dock leveler making them easy to see when entering or exiting a trailer.

The Rite-Vu™ Hazard Recognition and Control system is controlled by Rite-Hite's Dok-Commander™ control system. The Dok-Commander offers a number of advantages over traditional controls, including:



**Control Integration** – Dok-Commander has the ability to integrate a wide variety of controls into a single unit. This helps to simplify operation while freeing up wall space.

**Interlocking Equipment** – Dok-Commander has the ability to interlock systems, creating a customized sequence of operation that increases overall safety and productivity. For example, a sequence could be implemented that restricts a trailer from being released from an automatic vehicle restraint until a loading dock barrier is put in place.

**Visual Communication** – A visual display of the loading dock approach is integrated into the Dok-Commander control box, giving users a live look at trailers entering the area and vehicle restraint status. There is no need for a worker to go outside to confirm status.

**NEMA 4X Rated** – Protection for the components that help protect your people in the harsh loading dock environment.

**Security System Interface** – A Dok-Lok® and Dok-Commander pairing can physically enhance security at a facility when linked with an active building security system. If an engaged restraint is tampered with, the building security system is notified and facility protocol is followed.

Full-time safety at the loading dock often includes a removable barrier to guard the loading dock opening when a truck is not present. The Dok-Guardian™ Safety Barrier from Rite-Hite® is designed to stop up to 10,000-pounds traveling at up to 4 miles-per-hour. It provides a four-foot high visual barrier that stretches across the door opening and can be easily seen by workers. The Dok-Guardian can be interlocked with a Rite-Hite vehicle restraint, creating a sequence of operation that prohibits the barrier from being removed until a vehicle restraint is fully engaged.

## TOTAL LOADING DOCK SAFETY

Trailer separation accidents are another serious threat to loading dock personnel. Separation accidents are often the result of a communication breakdown, or the use of antiquated technology to secure trailers (i.e. wheel chocks).

An automatic vehicle restraint is the first layer of defense against trailer separation accidents and has long been synonymous with loading dock safety.



While vehicle restraints can't be overlooked when discussing total dock safety, modern technology has given birth to integrated systems that take safety to a whole new level.

To draw a simple comparison, look at the automobile industry. For decades, the seat belt was the gold standard for safety. Now modern automobiles are packed with safety enhancements, including air bags, automatic emergency braking, pedestrian detection, blind-spot assist, lane-departure warning and more. All of these systems working together have made automobiles safer.

Companies like Rite-Hite® are adopting similar technologies and are introducing them to industrial settings. These technological advancements, combined with the use of automatic vehicle restraints, are helping to elevate safety and productivity at the loading dock and beyond.

## TAKE CONTROL WITH A SYSTEMATIC APPROACH

Today's loading dock environments are busier, faster and more complicated than ever before. As a result, companies need to mitigate potential threats by using the most advanced systems and technologies. A systematic, multi-layered approach integrating motion sensors, visual/audible alarms, automated vehicle restraints and barriers is the most effective way to reduce risk at the loading dock.



To learn more about Rite-Hite's systematic approach to loading dock safety, visit [ritehite.com](http://ritehite.com) or call (800) 456-0600 to schedule a free loading dock assessment. The experts at Rite-Hite will help you identify potential hazards at the loading dock and will develop a customized solution to help protect your workers.