



THE COMPLETE GUIDE TO FORKLIFT SAFETY LIGHTING

Forklift lights are a “safety-first” OSHA requirement. While they’re often taken for granted, forklift lights help drivers see better in low-light situations, which ultimately increases safety and productivity. In addition to standard forklift lighting, there are other types of add-on warning lights that can help both forklift drivers and pedestrians stay safe while on the job.

But just like hammers and screwdrivers are necessary for a well-stocked tool kit, lighting isn’t the only (or always the best) solution for keeping pedestrians safe from forklifts. Below, we break down why forklift safety lights are important, forklift lighting requirements, additional forklift safety light recommendations, as well as forklift lighting Do’s and Dont’s.



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HIT-NOT Application Experts

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Why Are Forklift Safety Lights Important?

According to the US Department of Labor, 614 workers lose their lives in forklift-related incidents and more than 7,000 nonfatal injuries with days away from work occur every year due to forklifts.

Forklift Lighting: OSHA Safety Requirements

According to OSHA regulation 1910.178(h)(2) forklift auxiliary directional lighting is required in dimly lit indoor areas, outdoor areas at night, and everywhere else auxiliary lighting is required.

Forklift Headlights

Headlights are one of the most common types of forklift lights. They help alert other drivers and workers when you're coming toward them, so it's essential to always keep your headlights in good condition.

Forklifts Reverse Lights

There are many reasons why a forklift might need to reverse, so it's vital that your backup lights work properly. Like your forklift headlights, you'll want to ensure your tail lights are in good condition during all pre-operational safety checks.

It is important to use a forklift that has lighting for the specific task you are doing. If you change forklifts to do a different job, you may need a different lighting setup. Always check with your safety coordinator to make sure you have the proper lighting for the job at hand.



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How do accidents happen around forklifts?

With all the noise they create, shouldn't workers and pedestrians be able to avoid them?

- **Electric forklifts can't be heard.** Increasingly, workplaces are moving to cleaner, quieter, and more cost-effective electric lifts. But, not being able to hear a forklift increases the risk of being struck by a forklift.
- **Workers become complacent.** Accustomed to the signs, sounds, and signals of forklifts (and other warehouse and workplace noise), workers may not listen to or hear the danger of a forklift, even when it is looming.
- **Noise-protective headgear.** Both workers and pedestrians are increasingly wearing noise-protective head gear, which means they cannot hear the sound of approaching forklifts.
- **Not paying attention.** Your employees are busy and may be looking down at information on their clipboard or phone while walking through busy aisles without even knowing it!

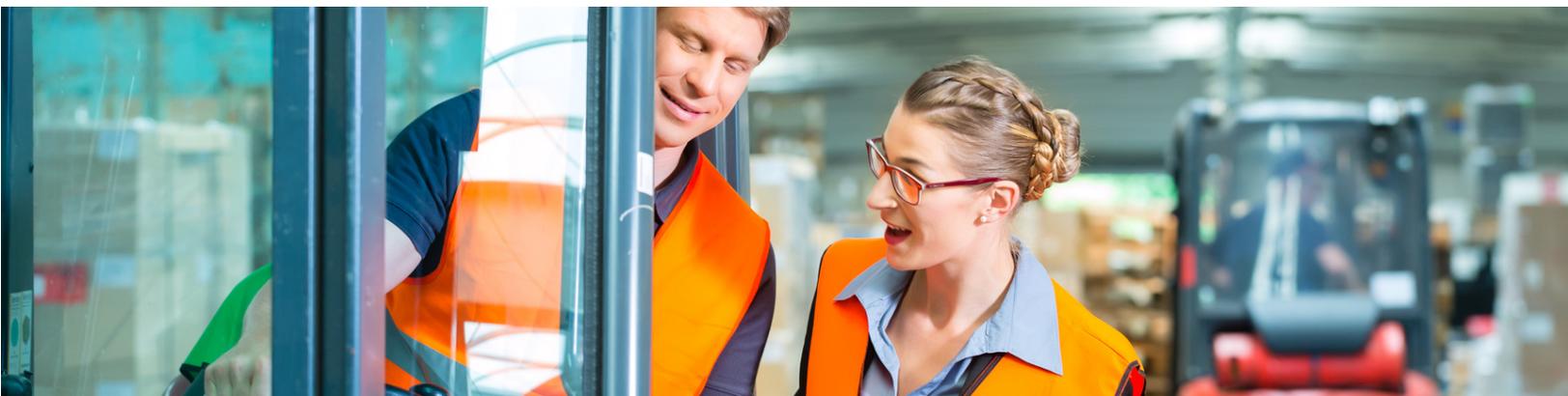
Forklift accidents can be prevented with the use of safety lights

The Purpose of Forklift Warning Lights

The most popular forklift warning lights, blue and red safety lights, are both used as pedestrian warning systems. The lights warn pedestrians, nearby workers, and other forklift drivers of the direction and speed of your forklift approach. The light shines on the ground in front, behind, and on the sides of your forklift.

Ideally, a bright blue or red light shining on the floor can quickly catch pedestrians' attention and warn them about impending danger. It's essential to use these safety lights when operating heavy equipment such as forklifts in order not only to prevent accidents but also injuries.

It's also important to note that while forklift auxiliary directional lighting is required in a dimly lit area, attaching forklift warning lights is not required (or prohibited) by OSHA.



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Types of Forklift Warning Lights & Recommendations

Blue Forklift Safety Lights Indicate Forward and Backward Motion

Blue forklift safety lights are attached to the front and back of your forklift and shine a bright blue light on the ground in front and behind the vehicle.

Depending on the angle, the blue light shines 10 to 20 feet from your forklift and moves along the floor with your forklift as it travels, indicating where you are going and how fast you are traveling.

How Blue Safety Lights Improve Safety

1. Blue Safety Lights Ensure Greater Safety When Backing up

When you are driving a forklift in reverse, it can be challenging to see what is behind you. Blue safety lights will warn pedestrians or other operators when you may have a limited rear view.

2. Blue Safety Lights Ensure Safety When You Are Moving Large Loads

It can be hard to see what is in front of you when you drive a forklift with a large load. The installation of a blue safety light on the front of your forklift will help warn pedestrians and other operators so they can move out of the way.



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Red Forklift Safety Lights Indicate the Safe Side Distance from Your Forklift

Red forklift safety lights are attached to the sides of your forklift and shine a bright red line of light on the ground to each side of your vehicle. This red line, also known as the “halo zone”, is a boundary about 2-5 feet along each side of your forklift that indicates how far back pedestrians and other machine operators should stay. Like blue forklift safety lights, this distance can be adjusted by angling the light. To ensure safety, pedestrians and other forklifts should not cross this halo line.

How Red Safety Lights Improve Safety

- Red Forklift Safety Lights Protect Pedestrians from Rear-End Swing

The front wheels on a car or truck steer the vehicle. However, forklifts have steering wheels in the rear so they swing around the front wheels supporting the load. As a result, the back end swings wide when the forklift turns,

If an operator does not understand or control their forklift, they might not be able to stop it from swinging and hitting someone or something. The red line (halo zone) on either side of your forklift indicates how far away people should stay from your forklift to keep safe.

Blue and Red Safety Lights Help to Warn Other Forklifts

By installing blue and red safety lights on your forklifts, you will not only be keeping pedestrians in your facility safer, but you will also cut down on the number of collisions between your material handling equipment.

- Using blue and red safety lights has proven to be an effective warning device to pedestrians that a forklift is approaching.
- Forklift operators also easily see blue and red forklift safety lights. Their bright light beams make a protective perimeter on your warehouse floor, clearly outlining the movement of your equipment. Other operators then have an obvious boundary that they should never cross.

Red and Blue lights aren't the only type of forklift warning lighting. There are additional types of warning lighting that can be used for specific reasons, as listed below.

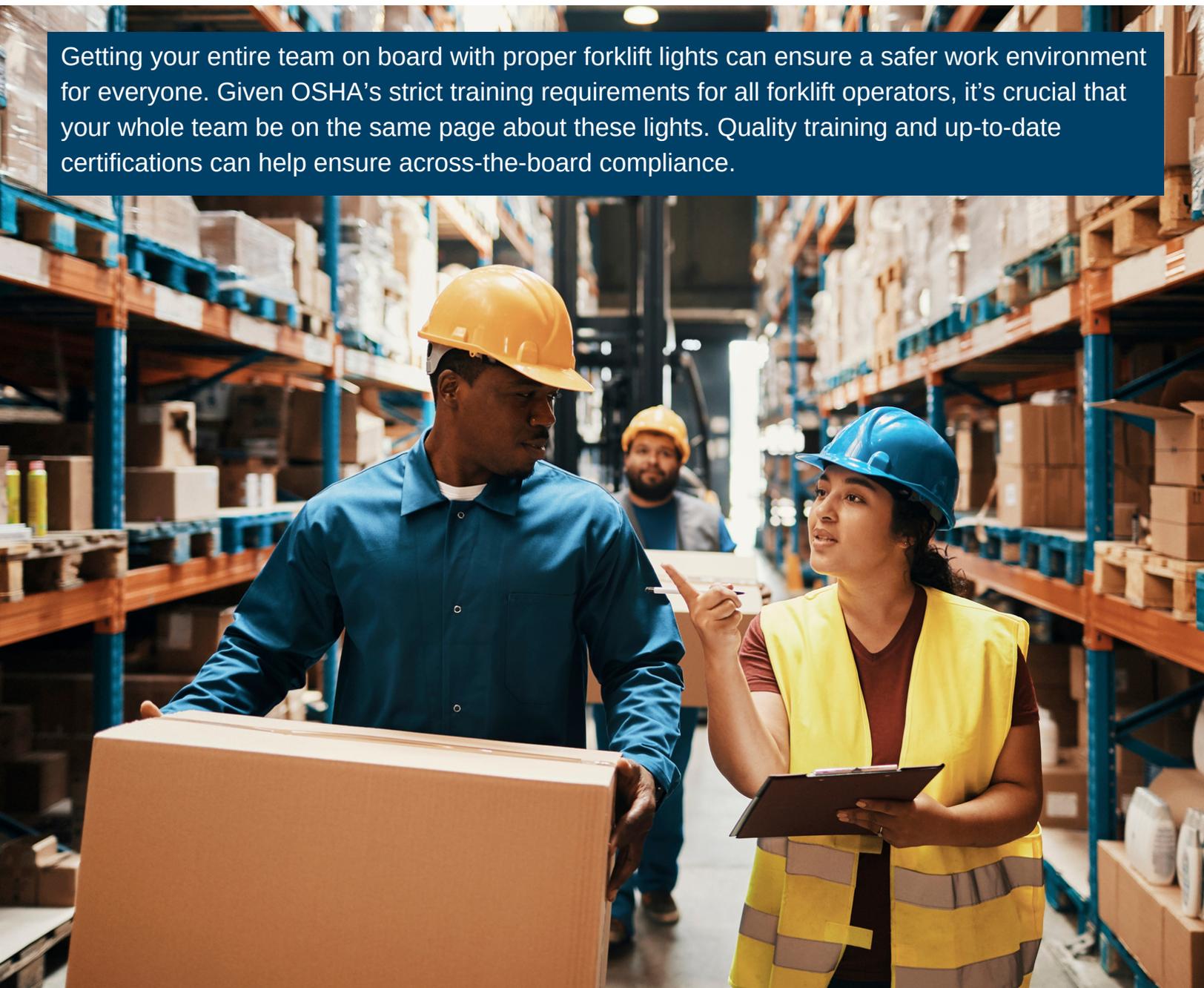
Additional Warning Lights

Top-Mounted Warning Flashing Light. Flashing lights and strobe lights can help draw attention to moving equipment, like forklifts, in low-light situations.

Green Forklift Warning Light. Green can be easier to see in high-light areas, making green warning lights a good choice for indoor and outdoor work areas that have good lighting.

Fork Tilt Warning Lights. Fork tilt warning lights are specialized lights mounted in the control cabin and alert drivers when their forks aren't aligned, helping prevent damage caused by product and cargo spills, pallet damage, and more.

Getting your entire team on board with proper forklift lights can ensure a safer work environment for everyone. Given OSHA's strict training requirements for all forklift operators, it's crucial that your whole team be on the same page about these lights. Quality training and up-to-date certifications can help ensure across-the-board compliance.



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Most Important Forklift Safety Light Do's and Dont's

The average forklift weighs 9,000 lbs and can range from 6,000 – 40,000 lbs when fully loaded. These lifts have long stopping distances and if emergency stopping is attempted it can cause load shifting. Blue and red lights can give operators and pedestrians 2-3 seconds to get out of the way of an oncoming lift. But only when lights are utilized correctly.

“Jimmy and I were in a warehouse visiting with a potential client. They had clearly marked aisles, all the proper warning signs, and we were in the proper area for pedestrians. But we never saw warning lights or heard the forklift coming before he blew by us, only about 2 feet away. Our potential client looked startled and said “Did you see his blue lights?” Sure enough, his front blue light had been knocked off-kilter and was pointing at the wall.”

- Tom Scott, Syntech Founder

When considering forklift warning lights, take note of these safety reminders to ensure that your lighting is both efficient and effective.

- **DO** be consistent. Inconsistent warning time is less safe than no warning time. Ensure that maintenance is installing the lighting and keeping it pointed a consistent distance away on each lift. And each color promotes a specific function, so it's important that you know what they all mean before operating one.
- **DON'T** make your red halo zone too small. The 2-5 foot halo zone outside of the forklift is oftentimes set too small for the wide, rear-end swing. If pedestrians walk to the line assuming they will be safe, they can still be hit when an operator makes a 90-degree turn. Have maintenance personnel install the lighting and have a safety officer check the swing distance.
- **DO** use LED lights. When it comes to the safety of your employees, don't compromise on capturing their attention. LED lights ensure visibility and have a longer lifespan than other lighting types.
- **DON'T** train your people to only look at the ground. Lights only work if they point in the direction where someone can see them coming. But walls, corners, racks, and other machinery can block the warning lights when forklifts approach. If pedestrians and operators only look at the ground for lights, they may miss warning signals and sounds all around them.
- **Do** check your warning lights during forklift pre-check. We see a lot of warning light installations. And we see a lot of warning lights installed improperly. They've been hit and are now pointed at the wall or even the ceiling. When you are using red and blue lights, make sure they are on your pre-check lists to ensure they are working properly every time.

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Summary of Forklift Safety Lighting

Forklift accidents can be prevented with the use of red and blue safety lights. But warning lights aren't fail-safe and can even provide a false sense of security to the driver and pedestrians.

Ultimately, forklift warning safety lights are only one aspect of on-the-job safety. While safety lights can be incredibly useful, they are far from the only safety tools in your toolbox, and they work best in conjunction with other safety features, including:

- Horns
- Seat Belts
- Floor Markings and Safety Signs
- Mirrors
- Reflective Clothing
- Blind Spot and Backup Cameras

"Adding anything safety-related to your fleet, like warning lights, is a good measure. But if you want something that can actually save a life, you should invest in HIT-NOT."
- Jimmy Helms, Syntech founder

Syntech & HIT-NOT®

We would be remiss if you weren't also familiar with HIT-NOT, a personalized safety option for protecting your people and property.

The HIT-NOT Proximity Detection System is the most precise pedestrian proximity detection system on the market today. Unlike traditional RFID systems, the HIT-NOT alert system does not have to see you to know where you are.

HIT-NOT can read and warn through walls, racks, and other blind corner obstructions that cause life-changing injuries and sometimes death. It is a precise marker with two zones, Warning and Danger, which are indicated by a LED light and audible sounder for the pedestrian and equipment driver simultaneously.

HIT-NOT is proven to save lives and eliminate vehicle-to-pedestrian collisions in the workplace.

How HIT-NOT and Warning Lights Can Work Together

Several of our clients have found success using warning lights and HIT-NOT together by setting consistent boundaries with the two. By setting your blue lights to the same distance as your HIT-NOT pedestrian warning zone, you have a visual reinforcement proven to save lives and eliminate vehicle-to-pedestrian collisions in the workplace.

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