WHITE PAPER

Prepare your warehouse for the new OSHA safety program

Understand the program, including criteria compliance officers will look for during inspection and strategies to prevent citations

Yale®
LIFT TRUCK TECHNOLOGIES

The Occupational Safety and Health Administration (OSHA) announced a national emphasis program (NEP) in July 2023 to reduce and prevent workplace hazards in warehousing and distribution center operations. Under this three-year emphasis program, which also includes mail and postal processing, local delivery and high-risk retail establishments, OSHA will conduct comprehensive safety inspections focused on hazards related to industrial vehicle operations, material handling and storage, and more.

What does this safety program mean for warehouses, and how can operations prepare for inspection and take steps to reduce injury rates?

Why the program exists

OSHA has introduced this program in response to dramatic growth in warehousing and related industries, and the surge in injury and illness rates that has accompanied that boom. The warehouse workforce has more than doubled in just a decade, expanding from 729,000 employees in 2014 to more than 1.7 million in 2024.

> In the past 10 years, warehousing and distribution centers have experienced tremendous growth. The Bureau of Labor Statistics data shows injury and illness rates for these establishments are higher than in private industry overall and, in some sectors, more than twice the rate of private industry.
>
> **OSHA**

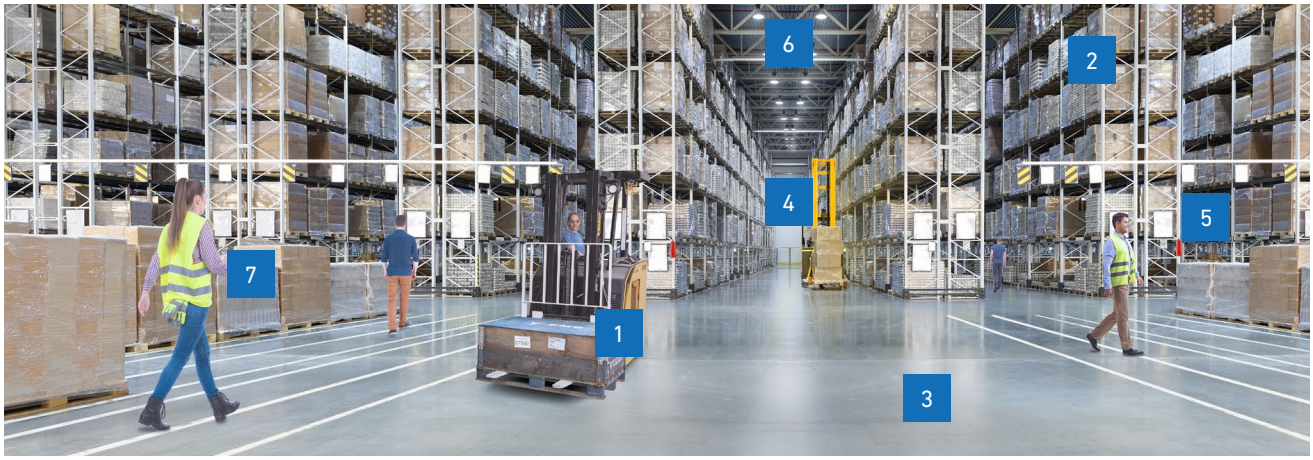
This influx of inexperienced workers into the warehousing industry and persistently high employee turnover has exacerbated common safety challenges. In the five-year period from 2018 to 2022, the national incidence rate for injuries and illnesses that resulted in days away from work, restricted or transferred (DART) increased from 3.9 to 4.7 cases per 100 full-time workers. National total recordable cases (TRC) have increased from 5.1 to 5.5.

SAFETY INCIDENTS IN THE WAREHOUSING AND STORAGE SUBSECTOR

(NORTH AMERICAN INDUSTRY CLASSIFICATION SYSTEM 493)

YEAR	NATIONAL DART	NATIONAL TRC
2018	3.9	5.1
2019	3.7	4.8
2020	3.9	4.8
2021	4.6	5.5
2022	4.7	5.5

The goal of the Federal OSHA warehouse safety national emphasis program (NEP) is to help operations make improvements to reduce these injuries and lost days. "Our enforcement efforts are designed to do one thing: lead to permanent change in workplace safety," said Assistant Secretary for Occupational Safety and Health Doug Parker. "This emphasis program allows OSHA to direct resources to establishments where evidence shows employers must be more intentional in addressing the root causes of worker injuries and align their business practices with the goal to ensure worker health and safety.



How the program works

The program is nationwide, however state-level OSHA agencies can either adopt the federal NEP, or adopt or adapt their own state emphasis plan (SEP) that meets the federal OSHA program requirements and is at least as effective as the NEP in protecting workers and preventing work-related injuries, illnesses and deaths. The way that warehouses are selected for inspection can vary for the state plans, but the federal program will determine site selection and scheduling through a targeting system. Establishments from two lists will be scheduled for inspection in random order. The first list includes facilities with warehousing, distribution and parcel processing industry codes and the second includes a limited number of retail establishment industry codes with the highest injury and illness DART rates. State programs may include a targeting mechanism as well or use another approach to schedule facilities for comprehensive safety inspections. In North Carolina, for example, inspections will be triggered rather than targeted, initiated by complaints, accidents or fatalities.

What compliance officers look for

Under the inspection procedures set out by the program, safety officers must review injury and illness records (forms 300, 300A and 301) and their reporting status, and complete an evaluation of potential hazards throughout the facility. According to OSHA, inspections will focus on a variety of serious safety and health hazards common in warehousing and distribution center operations, including:

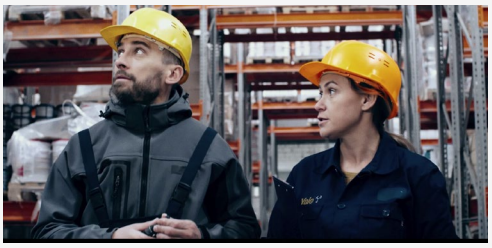
1. Powered industrial truck (PIT) operations
2. Material handling and storage
3. Walking-working surfaces
4. Means of egress
5. Fire protection
6. Heat hazards
7. Ergonomic hazards

If the safety officer observes heat and ergonomic violations, a health officer may also be brought in. Inspections for retail establishments will focus on storage and loading areas but may be expanded in scope if evidence shows that violations may exist in other areas of the establishment.

How to prepare for inspection

All states and territories, whether they operate under federal OSHA or an OSHA-approved state plan, offer on-site consultations that can help businesses identify areas of weakness and provide suggestions to improve health and safety. These consultations are available at **no cost** and with **no risk of citations**. Citations are not issued for any would-be violations the consultant identifies; the establishment simply agrees to correct the problem and records from the consultation are not shared with the inspection department.

Depending on the concerns and goals of the operation, the consultant can evaluate the entire facility, or just one area or challenge, then discuss recommendations. Lift truck safety can be a particularly important focus as warehouses prepare for inspections, due to the large number of lift trucks in use and the number of citations for improper PIT operation.



OSHA FINES AND THE VALUE OF NO-RISK CONSULTATIONS

In 2024, a willful violation citation usually starts around $160,000 for a single citation. If not willful, a citation could still be "serious" which starts at about $16,000. These fines do not go to OSHA but are instead distributed to the educational system in the county of the facility that received the citation.

FREQUENTLY CITED OSHA STANDARDS RESULTS

NAICS CODE: 493 WAREHOUSING AND STORAGE | ALL SIZE ESTABLISHMENTS

STANDARD	CITATIONS	INSPECTIONS	PENALTY	DESCRIPTION
19100178	207	142	$812,332	Powered industrial trucks
19100037	69	53	$324,462	Maintenance, safeguards, and operational features for exit routes
19101200	54	31	$99,051	Hazard communication
19100303	50	40	$111,329	General
19100176	49	41	$228,135	Handling materials - general
19100305	47	31	$71,452	Wiring methods, components, and equipment for general use
5A0001	41	38	$374,134	OSH Act general duty paragraph
19100157	33	25	$108,701	Portable fire extinguishers
19100028	31	28	$628,596	Duty to have fall protection and falling object protection

How to address lift truck safety

Lift truck safety is multi-faceted, site-specific and requires a comprehensive approach. Warehouses can be busy, noisy and include hot and cold environments. Lift truck operators must carefully maneuver and place loads at significant heights and navigate tight spaces and congestion. Beyond the inherent complexities of working safely and effectively in these settings, each million square feet of warehouse space requires about 80 to 100 lift trucks, and recent difficulty sourcing and retaining staff can result in warehouses utilizing a larger share of inexperienced operators.

Published OSHA estimates indicate that 35,000 serious injuries involving forklifts in some manner occur annually, and studies show that greater operator training and retraining on proper forklift operation could reduce accidents by as much as 70%.

Examples of types of accidents involving forklifts and some of the possible causes or contributing factors include:

- **Forklift tip-overs** – turning too quickly, uneven or unbalanced loads, abrupt mast movement, turning on an incline and driving with the load elevated or on uneven surfaces.
- **Accidents involving pedestrians** – undisciplined or untrained work force, insufficient traffic separation between forklifts and pedestrians, improper use of warning signs, traffic controls and signals; pedestrian and operator inattention, including fatigue, distraction and carelessness; and not looking in the direction of travel.
- **Falling loads** – lack of appropriate load backrest for the loads in question, damaged overhead guard, damaged forks or attachment; moving, lifting or tilting the mast too quickly; and improper load creation, including off center, damaged and unsecured goods.
- **Forklift falling off a dock or trailer** – trucks or trailers rolling away, slippery floors, worn or damaged truck or trailer floors and improper or missing dock plate.
- **Personnel falling from forks or personnel platforms** – absence of dedicated aerial lifts; unapproved, unattended, or unrestrained lifting platforms; and prioritizing speed and convenience over safety.
- **Impacts with other equipment or objects** – operating too closely to other forklifts in front of or around the truck, traveling too fast for the warehouse layout, traveling without a full field of vision or not looking in the direction of travel.

Which solutions can help mitigate hazards

What can warehouses do to help prevent accidents and reduce risk? In their announcement of the national emphasis program, OSHA points to its standards and solutions for common industry hazards, including those for PIT operation. As evidenced by the first point in the following table, comprehensive, OSHA-compliant operator training is the essential foundation for safe operation. A properly administered forklift and pedestrian training program is the single most effective means of reducing forklift accidents.

Warehouses seeking additional support to prioritize safety within their operation can also evaluate opportunities to leverage technology and support from experienced lift truck operator training or fleet management professionals. Lift truck technologies can provide varying types and degrees of support for managers or operators, such as providing a data-based view of problem areas or operating practices that require attention, helping to enhance situational awareness or even automatically reinforcing operating best practices. Every warehouse is unique, and technology can be an operational tool and additional layer of support for many OSHA directives for forklift operations, maintenance, repair and charging.

OSHA REQUIREMENT	SOLUTION(S) TO CONSIDER	HOW THE SOLUTION CAN HELP
Only trained and certified workers may operate a forklift. No one under the age of 18 may use a forklift. Operators must be trained on the type of vehicle in use, and on workplace conditions.	Training	A comprehensive program that includes the tools needed to customize training to the specific site and trucks can help operations deliver fully compliant training.
	Telemetry	Operator access controls can use key cards to limit equipment access to only operators with the proper licensing and training, and track performance and training expiration for each operator.
Before operating the vehicle, examine it for hazardous conditions which would make it unsafe to operate.	Telemetry	Digital safety checklists can disable truck use until the operator has completed the standard OSHA pre-shift checklist or other specific industry mandated checklists.
Always wear a seatbelt, if available. Do not give rides or use the forks to lift people.	Training	An OSHA-compliant training and certification program educates operators on requirements such as fastening the seat belt before operating the lift truck, where applicable, and that it is dangerous for anyone to ride anywhere on the lift truck except in designated seating areas.
	Telemetry	Digital safety checklists can require operators to confirm that the seat belt is working properly before operating the lift truck. An impact camera can also sync with telemetry detection systems so when a critical impact occurs, video footage, with front and rear panoramic views, of the moments before and after a critical impact is automatically saved.
Never exceed the rated load and ensure it is stable and balanced.	Training	A proper training program educates operators on the importance of never exceeding the rated weight of the truck and the potential consequences of picking up an overweight, unstable or unbalanced load.
	Operator assist technology	Overload arrest can restrict lift functionality when an operator attempts to lift a load that exceeds a truck's rated capacity. An advanced dynamic stability feature like adaptive fork and load control can automatically adjust lift and lower speeds, mast height, tilt range, tilt speed and reach extension speed to minimize the potential for the handling of the load to upset lift truck stability.
Ensure you have enough clearance when raising, loading, and operating the vehicle.	Training	A proper training program educates operators on the importance of maintaining proper clearance at all times.
	Operator assist technology	Real-time location sensing capabilities like fork height restriction can proactively alert operators of low overhead clearance by limiting truck travel speed and mast lifting speed until the operator has lowered the forks beneath the designated threshold or the truck exits the height-restricted zone. Some systems can detect obstacles and support operator awareness by automatically and noticeably reducing the speed of the lift truck. Detection can include obstacles in the path of travel or badged pedestrians and equipment in close proximity, or both, based on selected detection technology.
Follow safe procedures for picking up, putting down and stacking loads.	Training	A proper training program teaches operators how to safely pick up, put down and stack loads.
	Operator assist technology	Lift/lower soft stops can control lift and lower acceleration and deceleration to avoid loads being lowered too quickly and risking fragile products being 'slammed' onto the floor. Mast lift and lower control can manage mast speed to avoid loads being raised or lowered too quickly and potentially causing the mast to sway. Tilt speed and range control can limit mast tilt speed and range when a load is in an unfavorable tilt position, and tilt soft stop can manage tilt control to avoid sharp stops that could upset load and truck stability.

OSHA REQUIREMENT	SOLUTION(S) TO CONSIDER	HOW THE SOLUTION CAN HELP
Keep a safe distance from platform, ramp, and loading dock edges. Never back up a forklift to the dock's edge.	Training	During forklift training, operators are taught the hazards of tip overs and falling off docks, and learn the importance of keeping a safe distance from the training.
	Operator assist technology	Real-time location sensing functions like speed control zones can proactively reduce truck travel speed when operators enter specific designated areas designated to help promote correct operator behavior, while exclusion zones can proactively reduce travel speed to a very low rate to discourage operators from moving through certain designated areas in the facility at all.
Watch for pedestrians and observe the speed limit.	Training	Rules of the road, including those affecting pedestrian traffic, can differ widely from facility to facility. A proper forklift training program encompass pedestrian interactions with forklifts and unique site-specific rules such as right-of-way and speed limits.
	Operator assist technology	Object detection can reduce travel speed when a pedestrian is detected in the path of travel and proximity detection can do so when a pedestrian equipped with an ultrawideband badge is nearby, even if they are obscured from the operator's view, such as individuals in an aisle.
Slow down in congested areas and those with slippery surfaces.	Training	Proper forklift training covers the need to slow down to match your surroundings, including congestion and slippery surfaces.
	Operator assist technology	Speed control zones can proactively limit the travel speed in locations such as heavily populated areas or crosswalks that have been identified by site-management as zones where special speed control is desired.
Use horns at cross aisles and obstructed areas.	Training	Sounding a horn at cross aisles and in obstructed areas is a basic element of forklift operation that is covered in forklift training.
Ensure vehicles are maintained and repaired in accordance with manufacturers' recommendations. Do not modify or make additions to the forklift that could affect capacity and/or safe operation without prior written approval from the manufacturer.	Fleet management	A planned maintenance program that provides access to certified technicians same-day or even outside typical business hours can help maintenance and repairs to be completed in accordance with manufacturer standards, quickly.
Remove from service any forklift found to be in unsafe operating condition.	Training	Pre-shift inspection of forklifts is a basic element of forklift training, and operators learn to tag out forklifts that do not pass any aspect of the required inspection.
	Telemetry	Engine, transmission, hydraulic and electric system monitoring can trigger automated service calls. Digital safety checklists can disable truck use until the operator has completed the standard OSHA pre-shift checklist or other specific industry mandated checklists. Impact lockout protects equipment from prematurely returning to operation following a critical impact event.
Maintain safe clearances for aisles and at loading docks or passages.	Training	Forklift training teaches operators to maintain safe clearances at all times.
	Operator assist technology	End-of-aisle slowdown can proactively reduce travel speed of the truck at the end of an aisle, based on rules set by the operation, helping remind operators of their training and of proper operating practices. Object detection can reduce travel speed when another truck is detected in the path of travel and proximity detection can do so when a truck equipped with ultrawideband technology is nearby, even if it isn't directly in the path of travel or the operator's field of view.
	Telemetry	Location data can help identify efficient routes and areas prone to impacts to influence facility layout and traffic pattern changes to remediate problem areas

Taking the next step

Inspections for the warehouse safety NEP are already underway, having begun in October 2023. As your operation prepares for inspection and takes steps to prevent accidents and reduce risks, consult the OSHA resource for your state for an evaluation of your facility.

To learn more about improving safety within your lift truck operations, consider speaking with your local Yale® dealer.

XXXXYBTWP001_E_EN-US_V1R0_050724