Forklifts



incident

A Georgia farm was cited with safety violations after say a worker was fatally injured in a forklift accident.

The worker was pinned between a forklift load and a metal railing while doing maintenance work on a conveyor system at a Pearson Farm’s facility in Fort Valley, according to a release from the U.S. Department of Labor’s Occupational Safety and Health Administration.

After investigating the incident, OSHA cited the farm, which grows peaches and pecans, for several safety violations.

The farm is cited for “exposing employees to struck-by hazards,” and to “fall, chemical and amputation hazards,” the release says.

OSHA says employers didn’t have a system to detect “anhydrous ammonia leaks” or come up with an “emergency response plan.”

It also didn’t train employees for what to do in the case of a leak, have “effective machine guarding” or use procedures to control “hazardous energy,” OSHA says.

The company faces $128,004 in penalties for the violations, according to OSHA.

“Employers must assess their workplaces to identify hazards and take corrective actions to eliminate serious or life-threatening injuries and illnesses,” OSHA acting area director Condell Eastmond said in the release “A comprehensive safety and health program should be implemented to ensure controls are in place to protect workers.”

NEED TO KNOW

To illustrate the reach of the inherent danger of forklift operation, here are four accident scenes.

1. A warehouse worker is walking beside a forklift. The driver does not see him and starts to make a turn.

The rear wheels swing out and run over the pedestrian, causing fatal injuries.

- A worker is helping to guide a forklift load into place. He is crushed between the load and a stack of crates.
- Your coworker is operating a forklift near the edge of a loading dock. The wheels roll too close the edge, and the truck falls to the level below. The driver receives disabling injuries.
- A forklift operator reaches through the uprights to the load in front of him. His arm is crushed by the descending lift mechanism.

These are typical of the kinds of serious accidents which happen around forklifts. Often the victims are pedestrians who are struck either by the forklift or by the load. The operators themselves are often the victims as well, injured by the load, or the forklift mechanism.

Forklift safety is everyone's concern – not just that of the operator. Anyone who works in the plant – or just visits it occasionally- needs to be aware of the dangers associated with forklifts.

Here is a breakdown of the most common causes of forklift accidents:

1. **Poorly Trained Driver**

A poorly trained driver might not know how to respond to a changing workplace. New inventory, obstacles and employees, or changes in floor gradient, can all cause problems for an inexperienced operator. It helps to incorporate a comprehensive certification process in the operators' training program.

2. **Speeding**

All too often, drivers become comfortable and drive irresponsibly. In some cases, workers are under pressure to finish the job quickly or meet a time line. OSHA advises drivers to stay at or below 5 miles per hour. Even if the vehicle stops, the load may topple during harsh braking.

3. **Operating a Forklift with an Elevated Load**

This happens often in all sorts of industries. OSHA regulations encourage drivers to carry loads as near to the ground as possible, approximately 4 inches from the floor

4. **Improper Turning**

Forklifts are designed to balance heavy loads. So without a load, they're not necessarily the sturdiest machines. Turning a corner too fast can cause the lift to tilt to one side. The correct approach is to slow down well before the turn and maintain a gradual speed through the entire rotation.

5. **Insufficient Warnings and Markings**

In workplaces with both foot- and forklift traffic, it's an absolute necessity to mark forklift zones. Even if people must walk through these zones on a regular basis, they know when to watch out for heavy machinery. There are a number of ways to mark a forklift zone. While paint and standing signs work, floor tape is perhaps the most efficient option. If any wears or tears happen, it's easy to replace a small section of tape, which isn't true for standing

signs or even paint. Also, floor tape is easy to apply, and you don’t have to shut down production to get the job done.

6. **Giving Rides or Riding on the Forklift Load**

This is a common case of irresponsible operation. Under no circumstances should a driver transport a worker on a forklift load. Likewise, workers that are helping to load the truck should never use their body parts to balance a load.

7. **Workplace Design**

When purchasing forklifts, make sure it’s the right design for your needs. If you work in a warehouse with minimal aisle space, invest in a narrow-aisle lift. Workplace design can have a major impact on safe forklift operation.

BUSINESS / REGULATION

Forklifts play a key role for warehouses and other jobsites. They move heavy loads quickly and safely so that jobs get done faster. The get products in and out of the warehouse quicker. And they allow for more efficient storage. At the same time, driving a forklift involves a certain amount of risk.

Forklifts present workplace hazards for many reasons:

- They can weigh up to 9,000 lbs. (three times heavier than many cars)
- They load and unload heavy weights from high places
- They only have brakes in the front, making them harder to stop
- Uneven weight distribution can make them hard to handle
- Rear-wheel drive increases the chance of tipovers
- Full loads on the forks can obstruct the driver’s view

One of the biggest safety risks is using untrained forklift workers. OSHA believes that better training could reduce forklift accidents by about 70%.

OSHA Forklift Rules and Regulations

Forklift safety guidelines are outlined in OSHA Forklift Standards, Part 1910, Subpart N. The title is “Powered Industrial Trucks.” The subtitle is “Materials Handling and Storage.” You can read the guidelines on OSHA’s website.

General Requirements

This section covers safety guidelines for areas such as fire protection and design. It also covers maintenance and operation of certain types of trucks. These include fork trucks, tractors, platform lift trucks, and motorized hand trucks. These can be either electric or fossil fuel powered. The section does

not cover compressed gas trucks, farm vehicles, earth movers, or load haulers.

All new and used forklifts must meet required design and construction guidelines. These can be found in the “American National Standard for Powered Industrial Trucks, Part II, ANSI B56.1-1969”.

All trucks must have a label or other mark showing the approval of the testing lab. An approved forklift has passed fire safety tests performed by a recognized testing firm using approved testing standards. Any changes that alter the capacity and safety of a forklift must have written approval from the manufacturer.

OSHA Forklift Standards – Designations

- Battery charging stations should be placed in areas used only for that
- A conveyor or overhead hoist must be used to handle
- Recharged truck batteries must be safely
- Trucks must be braked to change or charge the battery.
- Battery vent caps must be in good working order.
- No smoking in the battery charging area.

This section of OSHA forklift rules and regulations covers 11 types of forklifts or tractors.

- D trucks are a lot like G trucks, except they use diesel rather than gasoline to power the engine.
- DS trucks also use diesel fuel. They come with more safeguards on the exhaust, fuel, and electrical systems.
- DY trucks have the safeguards of the DS without any electrical equipment. They also come with features that can limit the engine temperature.
- E trucks use electric power. They come with basic safeguards for fire hazards.
- ES trucks use electric power. As with E units, they must have safeguards that prevent sparks and limit surface temperatures.
- EE trucks use electric power, and have the same requirements as E and ES units. They also have an enclosed motor and other electrical gear.
- EX trucks use electric power. They have electrical fittings that are designed for use in areas that may have flammable vapors or dusts.
- G trucks use gas fuel. They have basic safeguards to protect against fire hazards.
- GS trucks use gas fuel. They have more safeguards to protect the exhaust, fuel, and electrical systems.
- LP trucks are about the same as G trucks but use liquid petroleum gas (LPG) instead of regular gas.
- LPS trucks use LPG. They also have come with extra safeguards for the exhaust, fuel, and electrical systems.

STATISTICS

Forklift Accident Statistics Industry statistics in the United States cite a 90% probability of a forklift being involved in a serious injury or fatality accident over its useful lifetime. The Occupational Safety & Health

Administration estimates that forklifts account for 61,800 minor injuries, 34,900 serious injuries, and 85 forklift related deaths every year. With almost 900,000 forklifts in operation in the United States, those numbers amount to a 1 in 10 chance that each forklift working in your facility will be involved in an accident this year. Almost 80% of forklift accidents involve a pedestrian. In the United States, 1 out of every 6 workplace deaths are forklift –related.

Forklift operations in warehouses across the industrial world are the defining mechanisms which underpin the existence of the warehouse. Significantly, 80% of forklift injurie are caused by human error. Injuries affects forklift operators, employees interfacing with the forklift operations and pedestrians.

More statistics:

Forklift fatalities by type of accident:

Crushed by vehicle tipping over – 42%

Crushed between vehicle and a surface – 25%

Crushed between two vehicles – 11%

Stuck or run over by a forklift – 10%

Stuck by falling material – 8%

Fall from platform on the forks -4%

According to OSHA in the United States, 70% of forklift accidents could have been avoided with standardized training and safety procedures.

Industry

Mining – 1.2%

Construction – 23.8 %

Manufacturing – 42.5 %

Transportation – 11.0 %

Wholesale Trades – 12.5 %

Retail Trade – 9.0 %

PREVENTION

Important Forklift Safety Procedures Include The Following:

- Drive only as fast as you can walk comfortably. Forklifts cannot travel safely at high speeds. Without loads, they are especially unstable.

- Keep the load low—While moving, forks should be positioned low, with the mast tilted slightly back.
- Maintain good visibility—If a load blocks forward vision, drive backwards.
- Back down slopes that have an incline greater than 10 percent. Make sure your backup alarm works properly.
- Never carry hitchhikers.
- Leave aisle room for others. Honk your horn before and while you enter an intersection.
- While parking on a hill, block the wheels, lower the forks and set the parking brake.

To avoid tipping over, don't drive with tall or top-heavy loads, make sharp turns slowly, and always carry your load upgrade. Back down ramps, and never turn on slopes. Be alert for sudden bumps, chuck holes and other uneven ground. Watch the road and cross railroads diagonally.

Load and unload safely

When preparing to enter a pallet, keep the forks high enough and as wide apart as possible.

To capture a load, lift and tilt it back so it's secure. Never exceed your forklift's weight limits.

For minimum clearance, forks should clear the road by six to eight inches (15 to 20 centimeters) and be positioned higher for negotiating ramps and grades.

Plan your route for safety

Turn slowly into position. Raise the forks if necessary.

To stack on a rack, raise the load to the right height and position, tilt the load forward and lower the pallet onto the rack. Withdraw the forks slowly. Back out, looking over your shoulder.

To stack materials on a truck, make sure the dock plate and truck can't move. Position the load, tilt it forward and release.

Everyone in an area near forklift traffic should:

- Never assume the forklift driver sees you.
- Understand that the forklift usually swings out at the rear end when turning.
- Keep clear of all the parts of a forklift.
- Never drive a forklift unless qualified to do so.

A forklift can be a big help or a source of disaster. Always treat it with respect.

The following are essential points to observe and follow in the operations of forklift activity.

- You must be both authorized and qualified before operating a forklift. Many accidents occur when untrained personnel attempt to drive a forklift. These

machines operate differently from an automobile and require special training.

- Inspect the vehicle before operating it. The controls, brakes, tires, lights, horn and other parts must be functioning correctly. Follow the manufacturer’s checklist for these daily inspections. Make minor adjustments if you are qualified, but leave major ones to trained and authorized mechanics.
- Check the load capacity of the forklift. Know the load capacity of any floors, elevators, ramps or trailers which you will be driving onto.
- Drive within the speed limit. Driving too fast can prevent you from stopping quickly enough, and can make the handling of the vehicle unstable.
- Stop as required at intersections. Sound the horn before proceeding around blind corners.
- If you can’t see around a load, drive backwards.
- Most forklifts are designed as one-person vehicles. Do not pick up passengers. They are often the victims of serious accidents when they fall off forklifts or are crushed by loads.
- Never allow anyone to walk under the raised forks, and never leave a load suspended in the air without being at the controls.
- Be aware of the dangers of carbon monoxide poisoning around gasoline-powered forklifts. Proper maintenance of engines and adequate ventilation of work areas will help prevent carbon monoxide accumulations.
- Follow all precautions for safe refueling of a forklift. Keep in mind gasoline and propane fuels and battery recharging devices can cause fires and explosions.
- When travelling up or down an incline with a loaded forklift, keep the load uphill from you. Travel slowly on ramps.
- Keep your head, hands and feet inside the operator’s compartment. Never reach through the uprights.
- Look before you back up.
- Keep the load low. Stop before you raise the load.
- Be aware of maximum height clearances. Loads can be knocked off by overhead obstructions.
- Watch for slippery surfaces, potholes and other hazards. Use the correct forklift for the surface on which you will be travelling. If a forklift is designed for indoor travel on smooth surfaces, it is hazardous to use it on outdoor terrain.