

Cherie Berry, Commissioner of Labor

1-800-625-2267 ♦ www.labor.nc.gov

Occupational Safety and Health Division

1101 Mail Service Center, Raleigh, NC 27699-1101

Forklifts and Material Handling

NCDOL Urges Employees to Be Aware of Material Handling and Storage Dangers

Material handling carries an accident risk that has always been a challenge to control. Unfortunately, material handling accidents can be deadly. Optimal material storage conditions, worksite layout, equipment condition and employee behavior are four approaches to a safe material handling environment. In North Carolina, fatalities have occurred as a result of material handling accidents.



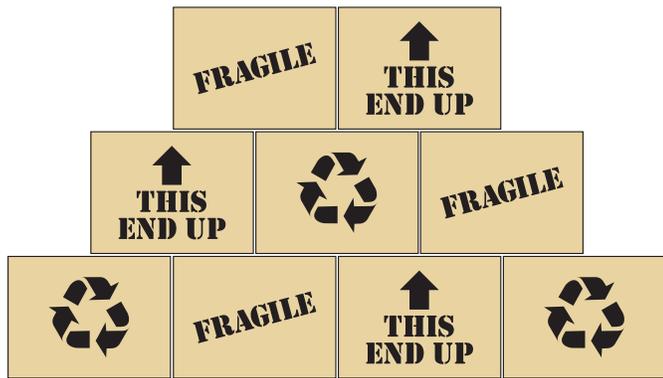
Drive in reverse when load blocks vision. Always look in the direction of travel.

The following five examples illustrate material handling dangers that resulted in fatalities.

- An employee was unloading a truck with a forklift and using a concrete brick ramp. Upon descending the ramp, the pallet bottom caught the ramp and turned “corner down.” The driver tried to square the pallet by turning the forklift on the ramp. After turning the forklift, the left wheels slipped off the ramp and knocked the guardrails to the ground. He removed his seatbelt and slid off the seat to the ground and took one step when the forklift fell off the ramp, fatally crushing him.

- A forklift operator was cleaning a cabinet that was on the forks of a lift truck while sitting in the driver’s seat. He reached through the mast with his right hand and head when he activated the lower lever of the truck. The upper part of the mast came down on his neck, asphyxiating him.
- During forklift operation, a forklift operator noticed that a hydraulic hose had jumped off its sheave. The operator then dismantled the equipment and went around the front. While troubleshooting/returning the hose, a nearby unbalanced stack of three cardboard bales fell. Two of the bales fell onto the operator. Responders called 911 while removing the bales with another forklift. The operator was unresponsive, received CPR and was transported to the hospital where he later died.
- A truck driver was outside of his truck and in a company yard area where forklift operators were moving bales of paper. The truck driver died after being run over by another forklift.
- At a distribution center, a few employees started conducting odd picks from order pickers when a loud crash was heard. Employees ran to see what happened and found an employee who had been working off an order picker lying face down on the floor of the warehouse. It appeared that he had fallen from the order picker, 12-15 feet to the concrete floor. EMS was contacted and the victim was taken to the local hospital in critical condition. The employee died 16 days later after being taken off of life support.

To prevent these type accidents, always be on a constant watch for your surroundings such as pedestrians, blind spots, and ramp/dock edges. During forklift operation, always wear your seatbelt and do not ever extend your hands, arms or head outside of the safe zone. If you end up in an unbalanced situation due to loads shifting or wheels leaving floor edges, do not remove your seatbelt and call out for help. In most cases, the safest place to be is to be belted in your seat. Always do your best to designate forklift work zones and pedestrian areas. Use your horn when needed as you approach blind spots and intersections.



Unstable material stacks can fall. Stack loads evenly and neatly. The top tier should be staggered to tie the pallets into place.

Material Handling

- Do not ever stack materials above a safe stacking height. Consider the use of warehouse rack storage when needed.
- Follow standard practices when stacking materials to ensure optimal stability. In addition, consider the use of shrink wrap to enhance the stability of a stack.
- Make sure that warehouse racks are not loaded above their rated capacity.
- Make your best effort to store the heaviest materials on the floor or on the lowest rack locations.

Forklift Operation

- Be careful during forklift movement near and around warehouse racks. If racks are struck by equipment, make sure to inspect all equipment immediately and take corrective action if necessary.
- Always use all appropriate fall protection equipment when elevated by lift trucks.
- Take pre-use inspections seriously and correct issues prior to operating a forklift.
- Instruct forklift drivers to always wear installed seatbelts.
- The forklift offers structural protection during an accident. In most cases, the driver is safest when remaining securely belted in the operator safety zone.
- Do not ever extend any part of your body outside of the safety zone during forklift operation.
- Drive the forklift in reverse if bulky items obstruct the front view.

- On inclines, always drive with the load uphill.
- Prior to trailer entry from a dock, inspect the trailer floor to ensure good condition. Do not drive forklifts into trailers that have damaged or weak floors.
- Make sure that trailers are secured from movement and tipping prior to forklift entry.

With proper training of employees and supervisory observation of employees operating forklifts, you can prevent tragedy at your workplace. NCDOL offers free training to employers on occupational safety and health standards. Copies of safety and health standards for 29 CFR 1910 (General Industry) and 29 CFR 1926 (Construction) are available from NCDOL/ETTA upon request. Publications can also be ordered online (www.labor.nc.gov).

For more information concerning education, training and interpretations of occupational safety and health standards contact:

Education, Training and Technical Assistance Bureau

Fourth Floor, Old Revenue Building, Raleigh, N.C.
Telephone: 919-707-7876, Fax: 919-807-2876

For more information concerning occupational safety and health consultative services and safety awards programs contact:

Consultative Services Bureau

Third Floor, Old Revenue Building, Raleigh, N.C.
Telephone: 919-707-7846, Fax: 919-807-2902

Mailing Address:

1101 Mail Service Center, Raleigh NC 27699-1101

www.labor.nc.gov ♦ 1-800-625-2267

Stay in touch with today's workplace issues.
Sign up to receive a free subscription to the *Labor Ledger* at
www.labor.nc.gov/news/labor-ledger

Follow NCDOL on:



All materials, photographs, graphics and illustrations created by the N.C. Department of Labor may be used for educational and training purposes as long as reference to NCDOL is provided. Any use of materials for commercial purposes is hereby prohibited.

Printed 12/10

500 copies of this public document were printed at a cost of \$45, or \$.09 per copy.

