# **POWERED INDUSTRIAL TRUCKS**

29 CFR 1910.178

This OSHA standard specifies regulations that must be complied with if powered industrial trucks are used.

The standard describes various operations that operators are *not* to perform such as allowing passengers to ride on the forklift, or allowing people to walk under elevated loads. These are the responsibility of both the operator and employer. The operator should be as safety conscious as possible; the employer should enforce safety-oriented driving habits.

## **Operators:**

Only trained and authorized operators may drive forklifts. The employer should develop a training program designed to teach the safe operation of forklifts.

#### **Trailers:**

When loading and unloading trailers, the brakes should be set and the wheels should be chocked to prevent the trailer from moving away from the dock when a forklift enters and exits. If the trailer pulls away from the dock, the possibility exists that the forklift could slip between the trailer and the dock, which could cause operator injury. Fixed jacks might be necessary to support the trailer to prevent upending during the loading and unloading process.

### **Overhead Protection:**

The employer is responsible for ensuring that there is sufficient overhead room for loaded forklifts to pass under objects such as support members, sprinkler systems, lights and pipes. Serious damage and possibly injury may result from a forklift contacting one of the above-mentioned items.

All forklifts should be provided with overhead protection designed to protect the operator from falling packages and small items in transit. The overhead guards are not designed to protect the operator from a falling full load. To assist in preventing a load from falling backward onto the operator, a load backrest extension should be used whenever necessary.

### Aisles:

Fire aisles, access to stairways and emergency fire equipment should never be blocked.

## **Damaged Equipment:**

If at any time a fork lift is found to be in need of repair, defective, or in any way unsafe, the fork lift must be taken out of service until repairs can be made which will restore the fork lift to safe operating condition. Repairs must be made by authorized personnel only. All forklifts should be examined at least daily, preferably before being placed in service, for any condition that might affect the safety of the vehicle. If the forklifts are used on a round-the-clock basis, they should be examined after each shift.

#### **Modifications:**

Any modifications or additions to the forklifts that would affect capacity and safe operation shall be performed only with written approval from the manufacturer. The capacity, operation and maintenance instruction plates, tags or decals should be changed to reflect any modifications. All nameplates and markings must be in place and maintained in a legible condition. These markings give vital information regarding load capacity and fuel.

#### **Carbon Monoxide:**

If the fork lift is powered by gasoline or liquid propane, then the motor should be maintained in such a condition to limit the generation of carbon monoxide gas to under the OSHA permissible exposure limit of 50 parts per million. When in doubt, the employer should have testing performed to determine what levels are being generated.

## **Battery-Powered:**

If the forklift is powered by battery packs, the battery charging stations should be located in areas designated for battery charging only. The area should be provided with facilities for flushing and neutralizing any spilled electrolyte, for fire protection, for protecting the charging equipment from damage from forklifts, and for adequately ventilating fumes from gassing batteries. There should also be a conveyor or overhead hoist (or some equivalent material handling equipment) to handle batteries. When the batteries are reinstalled, care should be taken to ensure their proper position and that they are secured.

# **Electrolyte Handling:**

A carboy tilter or siphon should be provided and used when handling electrolyte. When charging batteries, acid should be added to water and not the reverse. The gases vented from batteries can be explosive. All smoking shall be prohibited in the charging area. Precautions must be taken to prevent open flames, sparks or electric arcs in the battery charging area.

The electrolyte is caustic and since there is the possibility of someone getting electrolyte in their eyes or on their skin, appropriate eyewash and drench shower stations should be provided for immediate use. (For more information, see the IBT Safety and Health Fact Sheet about Medical Services and First Aid.) Any employees handling electrolyte should be provided personal protective equipment for use, such as gloves, aprons, and face-shields. (For more information, see the IBT Safety and Health Fact Sheet

about Personal Protective Equipment.)