

Powered industrial trucks: hazards, safe operation and maintenance

Workers who handle and store materials often use forklift trucks, platform lift trucks, motorized hand trucks and other specialized industrial trucks powered by electrical motors or internal combustion engines. Operators and other employees in the work area are exposed to a variety of potential exposures and hazards, which could lead to an injury. Therefore, affected workers should be aware of the safety requirements pertaining to fire protection, maintenance and use of these trucks.

SELECTION

It is the employer's responsibility to provide the proper powered industrial truck or forklift truck for the hazards present in the workplace. Whether these hazards are on construction sites or in commercial or industrial settings, equipment should be selected to provide the safest operation and minimize potential hazards to workers on site. The manufacturer or provider of the equipment can be a valuable resource for selecting the proper equipment for your specific workplace and associated hazards.

All operators should be trained and licensed to operate equipment that will be used. This includes classroom and hands-on training supervised by a competent and authorized trainer. Certification of training should be issued to the operator and available for review at all times.

POTENTIAL HAZARDS

- Handling and storing materials which are heavy and bulky.
- Falling objects from improperly stacked materials or by equipment working overhead.
- Crowded work areas.
- Blind traffic lanes and lack of traffic controls.
- Inadequately trained operators.
- Carbon monoxide exposures from operating fueled trucks in confined areas.
- Lack of equipment maintenance.
- Fire hazard from battery charging or refueling.
- Explosion from incorrect equipment used in work areas with potentially hazardous atmospheres.
- Improper use of trucks (i.e. riders).
- Poor workplace housekeeping in operating area.

SAFE OPERATION AND MAINTENANCE

- Daily inspection by the operator of equipment should be completed at the beginning of each work shift.
- Arms and legs should not be placed between the uprights of the mast or outside the running lines of the truck.
- Lower the load to travel height before moving and never allow the load to be above axle height unless stopped and lifting.
- Loads should be carried with a slight backward tilt and never at a vertical or forward tilt.

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- Make sure loads are correctly stacked and positioned across both forks.
- Take particular care when braking, accelerating or turning, as the force applied will alter the balance of your truck.
- Operators must not let others ride on the equipment unless another seat is fitted safely to the forklift truck.
- Highlift rider trucks should be fitted with an overhead guard, unless operating conditions do not permit this.
- Forklift trucks should be equipped with a vertical load backrest extension according to manufacturers' specifications, if the load presents a hazard.
- Only stable or safely arranged loads should be handled, and caution must be exercised while handling these loads.
- Sufficient headroom should be provided under overhead installations, lights, pipes and sprinkler systems.
- When using trucks, trailers or railroad cars to load or unload materials, brakes should be set and wheel blocks, or other adequate protection, in place to prevent movement.
- Dock boards or bridge plates should be properly secured, so they won't move when equipment moves over them.
- Auxiliary directional lighting should be provided on the truck where general lighting is less than 2 lumens per square foot.
- Battery charging installations should be located in areas designated for that purpose.
- When changing or recharging a battery, facilities should be provided for flushing and neutralizing spilled electrolytes. This will prevent fires, protect the charging apparatus from being damaged by the trucks and adequately ventilate fumes in the charging area from gassing batteries.
- Trucks whose electrical systems are in need of repair should have the battery disconnected prior to such repairs.
- Refueling trucks or replacing gas cylinders should only be done outside or in safe areas designated for this operation.
- Compressed gas cylinders used for forklift trucks should be properly stored and secured in designated areas.
- Only authorized personnel should be allowed to complete repairs on equipment.
- Replacement parts of any industrial truck should offer the same safety as the original ones.

SUMMARY

The variety of hazards encountered by powered industrial truck and forklift truck operators in the workplace are constantly changing and too numerous to be included in one list. Through operator training, proper selection and maintenance of equipment, and maintaining the work area, exposure to workplace hazards can be reduced. If you require assistance for a review of your material handling program, equipment and operator training, contact your local UFG loss control representative.

Source

U.S. Department of Labor/OSHA Office of Training and Education

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