

## Powered Industrial Trucks and Training

### **Description:**

Employees who operate powered industrial trucks, including lift trucks (forklifts), aisle sweepers, tugs, motorized pallet movers, and scissor lifts must be trained according to specific requirements in the OSHA powered industrial truck training standard before they can be authorized to operate such equipment. Employers whose operations involve powered industrial trucks must assure that powered industrial trucks are of proper design and construction for the intended use, and that they are properly maintained and operated in accordance with prescribed fire protection practices.

### **Regulatory Reference**

29 CFR § 1910.178 Powered industrial trucks.

### **Applies to:**

The standard applies to all employees whose job duties require them to operate a powered industrial truck (truck) and to employers whose operations include powered industrial trucks.

### **General Requirements:**

- (1) Employers must ensure that all new powered industrial trucks acquired and used by them meet the design and construction requirements for powered industrial trucks established in the *American National Standard for Powered Industrial Trucks, Part II, ANSI B56.1-1969*.
- (2) Approved powered industrial trucks shall bear a label or some other identifying mark indicating approval by a nationally recognized testing laboratory.
- (3) Modifications and additions which affect capacity and safe operation shall not be performed by the customer or user without manufacturer's prior written approval. Manufacturer approved modifications and/or additions shall be marked on the unit, and capacity, operation, and maintenance instruction plates, tags, or decals shall be changed accordingly.
- (4) If the truck is equipped with front-end attachments other than factory installed attachments, the user shall request that the truck be marked to identify the attachments and show the approximate weight of the truck and attachment combination at maximum elevation with load laterally centered.
- (5) The user shall see that all nameplates and markings are in place and are maintained in a legible condition.
- (6) For the purpose of this standard there are eleven different designations of industrial trucks or tractors as follows: D, DS, DY, E, ES, EE, EX, G, GS, LP, and LPS. (The designations indicate the type of fuel or power source, and the limitations of use in hazardous environments. See the standard for detailed definitions and Table N-1—Summary Table on Use of Industrial Trucks in Various Locations.)
- (7) The storage and handling of liquid fuels such as gasoline or diesel shall be in accordance with *Flammable and Combustible Liquids Code, NFPA 30-1969*. The storage and handling

of liquefied petroleum gas fuel shall be in accordance with *Storage and Handling of Liquefied Petroleum Gases*, NFPA 58-1969.

- (8) Only trained and authorized operators shall be permitted to operate a powered industrial truck.
- (9) Truck operations. Operation of powered industrial trucks must conform to the following provisions.
- (a) Trucks shall not be driven up to anyone standing in front of a bench or other fixed object.
  - (b) No person shall be allowed to stand or pass under the elevated portion of any truck, whether loaded or empty.
  - (c) Unauthorized personnel shall not be permitted to ride on powered industrial trucks. A safe place to ride shall be provided where riding of trucks is authorized.
  - (d) The employer shall prohibit arms or legs from being placed between the uprights of the mast or outside the running lines of the truck.
  - (e) When a powered industrial truck is left unattended, load engaging means shall be fully lowered, controls shall be neutralized, power shall be shut off, and brakes set. Wheels shall be blocked if the truck is parked on an incline. A powered industrial truck is unattended when the operator is 25 ft. or more away from the vehicle which remains in his view, or whenever the operator leaves the vehicle and it is not in his view. When the operator of an industrial truck is dismounted and within 25 ft. of the truck still in his view, the load engaging means shall be fully lowered, controls neutralized, and the brakes set to prevent movement.
  - (f) A safe distance shall be maintained from the edge of ramps or platforms while on any elevated dock, or platform or freight car. Trucks shall not be used for opening or closing freight doors.
  - (g) Brakes shall be set and wheel blocks shall be in place to prevent movement of trucks, trailers, or railroad cars while loading or unloading. Fixed jacks may be necessary to support a semi-trailer during loading or unloading when the trailer is not coupled to a tractor. The flooring of trucks, trailers, and railroad cars shall be checked for breaks and weakness before they are driven onto.
  - (h) An overhead guard shall be used as protection against falling objects. It should be noted that an overhead guard is intended to offer protection from the impact of small packages, boxes, bagged material, etc., representative of the job application, but not to withstand the impact of a falling capacity load.
  - (i) A load backrest extension shall be used whenever necessary to minimize the possibility of the load or part of it from falling rearward.
  - (j) Only approved industrial trucks shall be used in hazardous locations.
  - (k) Whenever a truck is equipped with vertical only, or vertical and horizontal controls for elevation of the lifting carriage or forks for lifting personnel, the following additional precautions shall be taken for the protection of personnel being elevated. A safety platform firmly secured to the lifting carriage and/or forks shall be used. Means shall be provided whereby personnel on the platform can shut off power to the truck. If the hazard of falling objects exists, as indicated by the operating conditions, protection shall be provided for personnel as necessary.
  - (l) Only stable or safely arranged loads shall be handled. Caution shall be exercised when handling off-center loads which cannot be centered. Only loads within the rated capacity of the truck shall be handled.
  - (m) Fuel tanks shall not be filled while the engine is running. Spillage shall be avoided.
- (10) If at any time a powered industrial truck is found to be in need of repair, defective, or in any way unsafe, the truck shall be taken out of service until it has been restored to safe operating condition. No truck shall be operated with a leak in the fuel system until the leak

has been corrected. Authorized personnel shall make all repairs. No repairs shall be made in Class I, II, and III locations.

- (11) Industrial trucks shall be examined before being placed in service, and shall not be placed in service if the examination shows any condition adversely affecting the safety of the vehicle. Such examination shall be made at least daily.
- (12) Industrial trucks shall not be altered so that the relative positions of the various parts are different from what they were when originally received from the manufacturer, nor shall they be altered either by the addition of extra parts not provided by the manufacturer or by the elimination of any parts, except as provided in paragraph (q)(12) of the regulation. Additional counterweighting of fork trucks shall not be done unless approved by the truck manufacturer.

### **Training Requirements:**

Training requirements for powered industrial truck operators is detailed in 29 CFR § 1910.178 (I).

Initial operator training requirements. Training shall consist of a combination of formal instruction (e.g., lecture, discussion, interactive computer learning, video tape, written material), practical training (demonstrations performed by the trainer and practical exercises performed by the trainee), and evaluation of the operator's performance in the workplace.

Persons who have the knowledge, training, and experience to train powered industrial truck operators and evaluate their competence shall conduct all operator training and evaluation.

Powered industrial truck operators shall receive initial training in the prescribed topics set out in the regulation, except in topics which the employer can demonstrate are not applicable to safe operation of the truck in the employer's workplace.

Refresher training and evaluation. Refresher training, including an evaluation of the effectiveness of that training, shall be conducted as required by paragraph (I)(4)(ii) to ensure that the operator has the knowledge and skills needed to operate the powered industrial truck safely.

Refresher training in relevant topics shall be provided to the operator when:

- (a) The operator has been observed to operate the vehicle in an unsafe manner;
- (b) The operator has been involved in an accident or near-miss incident;
- (c) The operator has received an evaluation that reveals that the operator is not operating the truck safely;
- (d) The operator is assigned to drive a different type of truck; or
- (e) A condition in the workplace changes in a manner that could affect safe operation of the truck.

An evaluation of each powered industrial truck operator's performance shall be conducted at least once every three (3) years.

Certification. The employer shall certify that each operator has been trained and evaluated as required by paragraph (I) of the regulation. The certification shall include the name of the operator, the date of the training, the date of the evaluation, and the identity of the person(s) performing the training or evaluation.

For employees hired before December 1, 1999, initial training and certification to operate a powered industrial truck must have been completed by December 1, 1999. For employees hired after December 1, 1999, initial training and certification to operate a powered industrial truck must have be completed before the employee is assigned to operate a powered industrial truck.

## **Maintenance and Review**

Periodic inspections of powered industrial trucks should be conducted and documented to verify that required markings and maintenance operations are as required in the regulation.

All employees who work around powered industrial trucks should be provided notice of required operating procedures and operator training requirements. They should be given special notice of prohibited practices such as unauthorized use, riding, or using forklifts to lift personnel without approved personnel protective attachments.

Initial training and refresher evaluations should be fully documented for authorized operating personnel, that the documentation should be reviewed on a scheduled basis. If any incident or accident occurs that involves truck operation, the operator and other persons involved should be immediately refresher training and their certifications evaluated.

Violation citations are issued when OSHA inspectors find:

- (a) trucks operated by unauthorized and uncertified personnel;
- (b) the lack of training and operator evaluation documentation that demonstrates compliance with prescribed training and evaluation program requirements;
- (c) improperly marked or maintained trucks;
- (d) improper modifications to trucks;
- (e) trucks operating in hazardous atmospheres that are not approved for the location; or
- (f) any other violation of the OSHA powered industrial truck standard.

## **Additional Information and Resources**

Appendix A to § 1910.178 Stability of Powered Industrial Trucks (Non-Mandatory)

Users guides and operating instructions supplied by powered industrial trucks should be retained, and made available to authorized operators

Training resources are available from:

- Industrial truck manufacturers and manufacturers' representatives
- OSHA training guides

And from:

- Safety training firms, such as,

*Industrial Truck Operator Training and Qualification Series*, Industrial Training Services, Inc., Murray, KY

J.J. Keller and Associates, Neenah, WI