

Powered Industrial Truck Training

(OSHA 1910.176; 1910.178 & 1910.30)



This material was produced under grant number 46EO-HT08 from the Occupational Safety and Health Administration, U.S. Department of Labor. It does not necessarily reflect the views or policies of the U.S. Department of Labor, nor does mention of trade names, commercial products or organizations imply endorsement by the U.S. Government.

Revisions were made to this material under grant number SH-05059-SH8 from the Occupational Safety and Health Administration, U.S. Department of Labor.

Powered Industrial Trucks

TRAVEL SPEEDS

1. Internal Combustion Lift TrucksTop Speed - 9 MPH (13' Per Second)
2. Electric Lift Trucks.....Top Speed - 6 MPH (10' Per Second)
3. Walker Pallet Trucks.....Top Speed - 3 MPH (5' Per Second)

STOPPING DISTANCE

BRAKE APPLIED DISTANCE TRAVELED:

1. Internal Combustion Lift Trucks....15-17 FT
2. Electric Lift Trucks.....8-12 FT
3. Walker Pallet Trucks.....4-6 FT

TOTAL STOPPING DISTANCE:

1. Internal Combustion Lift Trucks.....30 FT
2. Electric Lift Trucks.....20 FT
3. Walker Pallet Trucks.....10 FT

- Note: *Expect the unexpected from pedestrians and other P.I.T.'s.
 - * Most plants share the aisles for both PIT's and pedestrians.
 - * Storage at cross-aisles obstruct your view -slow down & sound horn!
 - * Pedestrians think if they see you, you must see them.....FALSE!

Forklift Checklist

Employee : _____ Date: _____ Time: _____

- ___ 1. Shows familiarity with truck controls.
- ___ 2. Arms, legs, head and inside running lines of the Powered Industrial Truck.
- ___ 3. Slowed down at intersections.
- ___ 4. Sounded horn at intersections.
- ___ 5. Obeyed signs.
- ___ 6. Kept a clear view of direction of travel.
- ___ 7. Turned corners correctly and was aware of rear end swing.
- ___ 8. Yielded to pedestrians.
- ___ 9. Drove under control and within proper traffic aisles.
- ___ 10. Approached load properly.
- ___ 11. Lifted load properly.
- ___ 12. Maneuvered properly.
- ___ 13. Traveled with load at proper height.
- ___ 14. Lowered load smoothly/slowly.
- ___ 15. Stops smoothly/completely.
- ___ 16. Load balanced properly.
- ___ 17. Forks under load all the way.

- ___ 18. Carried parts/stock in approved containers.
- ___ 16. Checked bridgeplates/ramps.
- ___ 17. Placed loads within marked area.
- ___ 18. Stacked loads evenly and neatly.
- ___ 19. Drove backward when required.
- ___ 20. Checked load weights.
- ___ 21. Unattended lift, forks, controls neutralized and shut off.
- ___ 22. Followed proper instructions for checklist at beginning of shift.

Rating: _____

1910.178 Powered industrial trucks

(l)(1)(I) Operator training
through (7)

(1) *Safe Operation.*

1910.178(l)(1)(ii)

Prior to permitting an employee to operate a powered industrial truck (except for training purposes), the employer shall ensure that each operator has successfully completed the training required by this paragraph (l), except as permitted by paragraph (l)(5).

1910.178(l)(2)

Training program implementation.

1910.178(l)(2)(i)

Trainees may operate a powered industrial truck only:

1910.178(l)(2)(i)(A)

Under the direct supervision of persons who have the knowledge, training, and experience to train operators and evaluate their competence; and

1910.178(l)(2)(i)(B)

Where such operation does not endanger the trainee or other employees.

1910.178(l)(2)(iii)

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.

1910.178(l)(2)(iii)

All operator training and evaluation shall be conducted by persons who have the knowledge, training, and experience to train powered industrial truck operators and evaluate their competence.

1910.178(l)(3)

Training program content. Powered industrial truck operators shall receive initial training in the following topics, except in topics which the employer can demonstrate are not applicable to safe operation of the truck in the employer's workplace.

1910.178(l)(3)(i)

Truck-related topics:

1910.178(l)(3)(i)(A)

Operating instructions, warnings, and precautions for the types of truck the operator will be authorized to operate;

1910.178(l)(3)(i)(B)

Differences between the truck and the automobile;

1910.178(l)(3)(i)(C)

Truck controls and instrumentation: where they are located, what they do, and how they work;

1910.178(l)(3)(i)(D)

Engine or motor operation;

1910.178(l)(3)(i)(E)

Steering and maneuvering;

1910.178(l)(3)(i)(F)

Visibility (including restrictions due to loading);

1910.178(l)(3)(i)(G)

Fork and attachment adaptation, operation, and use limitations;

1910.178(l)(3)(i)(H)

Vehicle capacity;

1910.178(l)(3)(i)(I)

Vehicle stability;

1910.178(l)(3)(i)(J)

Any vehicle inspection and maintenance that the operator will be required to perform;

1910.178(l)(3)(i)(K)

Refueling and/or charging and recharging of batteries;

1910.178(l)(3)(i)(L)

Operating limitations;

1910.178(l)(3)(i)(M)

Any other operating instructions, warnings, or precautions listed in the operator's manual for the types of vehicle that the employee is being trained to operate.

1910.178(l)(3)(ii)

Workplace-related topics:

1910.178(l)(3)(ii)(A)

Surface conditions where the vehicle will be operated;

1910.178(l)(3)(ii)(B)

Composition of loads to be carried and load stability;

1910.178(l)(3)(ii)(C)

Load manipulation, stacking, and unstacking;

1910.178(l)(3)(ii)(D)

Pedestrian traffic in areas where the vehicle will be operated;

1910.178(l)(3)(ii)(E)

Narrow aisles and other restricted places where the vehicle will be operated;

1910.178(l)(3)(ii)(F)

Hazardous (classified) locations where the vehicle will be operated;

1910.178(l)(3)(ii)(G)

Ramps and other sloped surfaces that could affect the vehicle's stability;

1910.178(l)(3)(ii)(H)

Closed environments and other areas where insufficient ventilation or poor vehicle maintenance could cause a buildup of carbon monoxide or diesel exhaust;

1910.178(l)(3)(ii)(I)

Other unique or potentially hazardous environmental conditions in the workplace that could affect safe operation.

1910.178(l)(3)(iii)

The requirements of this section.

1910.178(l)(4)

Refresher training and evaluation.

1910.178(l)(4)(i)

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

1910.178(l)(4)(ii)

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

1910.178(l)(4)(ii)(A)

The operator has been observed to operate the vehicle in an unsafe manner;

1910.178(l)(4)(ii)(B)

The operator has been involved in an accident or near-miss incident;

1910.178(l)(4)(ii)(C)

The operator has received an evaluation that reveals that the operator is not operating the truck safely;

1910.178(l)(4)(ii)(D)

The operator is assigned to drive a different type of truck; or

1910.178(l)(4)(ii)(E)

A condition in the workplace changes in a manner that could affect safe operation of the truck.

1910.178(l)(4)(iii)

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

1910.178(l)(5)

Avoidance of duplicative training. If an operator has previously received training in a topic specified in paragraph (l)(3) of this section, and such training is appropriate to the truck and working conditions encountered, additional training in that topic is not required if the operator has been evaluated and found competent to operate the truck safely.

1910.178(l)(6)

Certification. The employer shall certify that each operator has been trained and evaluated as required by this paragraph (l). 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.

1910.178(l)(7)

Dates. The employer shall ensure that operators of powered industrial trucks are trained, as appropriate, by the dates shown in the following table.

| If the employee was hired: | The initial training and evaluation of that employee must be completed: |
|-----------------------------------|--|
| Before December 1, 1999 | By December 1, 1999. |
| After December 1, 1999 | Before the employee is assigned to operate a powered industrial truck. |

Operators' Rules of the Road

These general rules apply to all operators of a Powered Industrial Truck (P.I.T.). These rules are a reflection of the PIT OSHA Standard.

1910.178 Requirements:

General Requirements

- Shall meet the design and construction requirements of ANSI 856.1-1969
- Modifications and additions to PIT shall not be done by the customer without prior written approval of the manufacturer of the PIT
- User shall see that all nameplates and markings are in place and maintained in a legible condition

Designations

- There are 11 different designations for types of PIT's
- These let you know how each one is constructed and their safeguards.

Designated Locations

- Guides you to the minimum type PIT to use in that area

Safety Guards

- Overhead guard required to protect from falling small packages
- Vertical backrest required to protect PIT Operator from packages falling into drivers' compartment

Changing and Charging storage batteries

- Located in designated area for that purpose
- Eyewash/shower
- Fire protection
- Adequate ventilation for dispersal of fumes from gassing batteries
- Conveyor, hoist or equivalent material handling equipment shall be provided for handling batteries
- Reinstalled batteries shall be properly positioned and secured in the truck
- Means provided for handling acid shall be provided (carboy or siphon) and never pour water into acid
- Check vent caps-are they there and properly working
- Keep anything that may spark away from the uncovered battery

Lighting for operating areas

- Forklift shall be equipped with directional lighting if the general lighting is less than 2 lumens per square foot

Control of noxious gases and fumes

- Concentration levels of carbon monoxide gas created by the PIT shall not exceed the Permissible Exposure Limits (PEL) which is 50 ppm

Dockboards (bridge plates)

- Know the capacity of the dockplates
- Never exceed the capacity
- Make sure securely in place

Trucks/railroad cars

- Wheel chocks in place and tractor brakes set before driving into the trailer
- Fixed nose jacks in place to prevent upending of the trailer when tractor not attached to trailer

Operator Training

Truck operations

- Shall not be driven up to anyone standing in front of a bench or fixed object
- No person shall be allowed to stand or pass under raised forks loaded or unloaded
- No passengers
- Arms and legs inside running line of the PIT
- Forks shall be fully lowered, controls neutralized, power shut off and brakes set before getting off the PIT
- Maintain safe distance from edge of ramps and other elevated docks or platforms
- The flooring of trucks, trailers and railroad cars shall be checked for breaks and weakness before they are driven into
- Know the height of your PIT and the ceiling height where you may be traveling
- Fire aisles, access to stairways and fire equipment shall be kept clear

Traveling

- All plant traffic regulations shall be observed

- Maintain three (3) truck lengths from the truck ahead
- Keep PIT under control at all times
- Slow down and sound horn at cross aisles and where vision is obstructed
- Drive with load trailing when clear view of forward travel is obstructed
- The driver shall be required to look in the direction of and keep a clear view of the path of travel
- Stunt driving and horseplay shall not be permitted
- Slow down while negotiating turns

Loading

- Only stable and safely arranged loads shall be handled
- Only loads within the rated capacity of the PIT shall be handled
- Long/high loads shall be adjusted if it affects capacity
- Place forks as far as possible under load
- Tilting forward prohibited when raised except to pickup load

Operation of the PIT

- If, at any time, a PIT is found to be in need of repair, defective or in any way unsafe the PIT shall be taken out of service until repaired

Maintenance of PIT

- Repairs must be made by authorized personnel
- All parts of any PIT requiring replacement shall be with parts equivalent, as to safety, with those used in the original design.
- Additional counterweighting of PITs shall not be done unless approved by the PIT manufacturer
- PITs inspection must be done at least daily. Where they are used on a round-the-clock basis the inspection must be done on all three shifts

Forklift Pre-Operation Inspection Checklist

Operator: _____ Date: _____

Shift: _____ Lift #: _____

Place an "X" beside the item that needs attention and explain issue in space below.
Mark the item as OK if it operates correctly.

- | | |
|--|------------------------------------|
| _____ Service Brake | _____ Lift Control |
| _____ Parking Brake | _____ Fluid Levels |
| _____ Steering | _____ Tilt Control |
| _____ Horn | _____ Limit Switches |
| _____ Lights | _____ Hydraulic Cylinders |
| _____ Tires/Wheels | _____ Hydraulic Hoses/Fittings |
| _____ Overhead Guard | _____ Battery Connection/Condition |
| _____ Forks, Mast, Chains, Stops, Backrest | |

Explain any "X" marked above:

Signature: _____ Date: _____

Supervisor Signature: _____ Date: _____