

***-Sample-***

## **Powered Industrial Truck Program**

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Safety programs are most effective when they are designed to meet the specific and individual needs of each company. This safety program does not constitute a complete and comprehensive safety program. The intent of this safety program is to encourage the development of individual company specific program by providing a sample format and suggested wording for program components.

This safety program is not intended to be an exhaustive treatment of the subject, and should not be interpreted as precluding other procedures which would enhance the safety of your place of work or project sites.

Midwest Builders' Casualty makes no guarantee, warranty or assurance, expressed or implied, that this safety program will insure compliance or is in compliance with requirements of any OSHA regulation or any other law or regulation dealing with safety as it pertains to employees or the safety regulations as it pertains to hazardous substances and/or the work environment.

# POWERED INDUSTRIAL TRUCK OPERATOR PROGRAM

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**-SAMPLE-  
POWERED INDUSTRIAL TRUCK PROGRAM**

**A. SCOPE**

The following program addresses the safe operation, inspection, safety rules, servicing of batteries, and driver's training for powered industrial trucks.

**B. STATEMENT OF POLICY**

It is the policy of \_\_\_\_\_ that all employees will operate powered industrial trucks according to the rules and procedures set forth in this program. It is important that every employee recognizes his or her responsibilities as it relates to the safe operation of powered industrial trucks.

**C. POWERED INDUSTRIAL TRUCK SAFETY RULES**

1. Only trained and authorized operators will be permitted to operate a powered industrial truck.
2. If a truck is in need of repair or in any way unsafe, the truck must be taken out of service until repairs have been made.
3. No riders shall be permitted on vehicles unless provided with adequate riding facilities.
4. Stunt driving and horseplay is strictly prohibited.
5. Loaded trucks shall not be moved until the load is safe and secured.
6. When leaving a vehicle unattended, the power shall be shut off, brakes set, the mast brought to the vertical position, and the forks left in the down position.

**NOTE:** *A powered industrial truck is unattended when the operator is 25 feet or more away from the vehicle which remains in his or her view, or whenever the operator leaves the vehicle and it is not in his or her view.*

7. When the operator is dismounted and within 25 feet of the truck in his or her view, the load engaging means shall be fully lowered, controls neutralized, and the brakes set to prevent movement.
8. Trucks shall not be driven up to anyone standing in front of a bench or other fixed object(s) of such size that the person could be caught between the truck and the object.
9. Operators shall look in the direction of travel and shall not move a vehicle until certain that all person(s) are in the clear.
10. Employees shall not ride on the forks of the lift truck, or be allowed to stand on the forks and be vertically raised or lowered without being adequately protected.
11. Trucks shall not be loaded in excess of their rated capacity.
12. Railroad tracks shall be crossed diagonally whenever possible.

13. Parking closer than 8 feet from the center of the railroad tracks is prohibited.
14. The forks must be placed under the load as far as possible and the mast tilted back to stabilize the load.
15. Extreme care should be taken when tilting loads. Elevated loads shall not be tilted forward except for when the load is being deposited onto a storage rack, scaffolding system or equivalent.
16. Grades must be ascended or descended slowly.
17. When ascending or descending grades in excess of 10 percent, loaded trucks must be driven with the load upgrade.
18. Brakes must be set and wheel blocks in place to prevent movement of trucks, trailers, or rail cars while loading and unloading.
19. The flooring of trucks, trailers, and rail cars must be checked for breaks and weakness before they are driven onto.
20. Fixed jacks may be necessary to support a semi-trailer and to prevent upending during the loading and unloading of the trailer when it is not coupled to a tractor.
21. Dock plates must be strong enough to carry the load imposed on them.
22. Trucks must be operated at a speed that will permit stopping in a safe manner.
23. Smoking is strictly prohibited while refueling forklifts.

#### D. INSPECTION

It is the policy of \_\_\_\_\_ that all forklift operators must check the vehicle he or she is operating at the start of each work shift. If the vehicle is found to be unsafe, it must be reported to their supervisor immediately. No forklift shall be operated in an unsafe condition.

Each forklift operator must complete a "Powered Industrial Truck Inspection Report" form for his or her work shift. Note any unsafe condition(s) on this report. These reports shall be turned into his or her supervisor at the end of each work shift.

#### E. MAINTENANCE OF POWERED INDUSTRIAL TRUCKS

1. Only authorized personnel are allowed to make repairs to powered industrial trucks.
2. Repairs may not be made in Class I, II, and III locations.
3. Repairs to the fuel and ignition systems that involve fire hazards must be conducted only in designated locations. No truck shall be operated with a fuel system leak.
4. Industrial trucks in need of repairs to the electrical system must have the battery disconnected prior to such repair.

5. Industrial trucks shall not be altered without approval of the truck manufacturer.

F. CHANGING, CHARGING, AND STORAGE OF BATTERIES

1. Battery charging installations must be located in areas designated for that purpose.
2. Facilities must be provided for the following:
  - a) For flushing and neutralizing spilled electrolyte.
  - b) For fire protection.
  - c) For protecting charging apparatus from damage by trucks.
  - d) For adequate ventilation for dispersal of vapors from batteries.
3. A conveyor, overhead hoist, or equivalent material handling equipment must be provided for handling batteries.
4. Reinstalled batteries must be properly positioned and secured in the truck.
5. A carboy tilter or siphon must be provided for handling electrolyte.
6. When charging batteries, acid must be poured into water; water must not be poured into acid.
7. Trucks must be properly positioned and brakes applied before attempting to change or charge batteries.
8. Care must be taken to assure that vent caps are functioning. The battery (or compartment) cover must be open to dissipate heat.
9. Smoking is prohibited in the charging area.
10. Precautions must be taken to prevent open flames, sparks, or electric arcs in the battery charging area.
11. Tools and other metallic objects must be kept away from the top of uncovered batteries.

**POWERED INDUSTRIAL TRUCKS DESIGNATIONS**

“D”	Diesel powered for general use in non-hazardous atmospheres.
“DS”	Diesel powered with safeguards to the exhaust, fuel and electrical systems.
“DY”	Diesel powered that do not have any electrical equipment including the ignition. Must be equipped with temperature limitation features.
“E”	Electrical powered for general use in non-hazardous atmospheres.
“ES”	Electrical powered with safeguards to the electrical system.
“EE”	Electrical powered with all electrical equipment completely enclosed.
“EX”	Electrical powered that can be used in atmospheres containing flammable vapors or dusts.
“G”	Gasoline powered for general use in non-hazardous atmospheres.
“GS”	Gasoline powered with safeguards to the exhaust, fuel, and electrical systems.
“LP”	LP gas powered for general use in non-hazardous atmospheres.
“LPS”	LP gas powered with additional safeguards to the exhaust, fuel, and electrical systems.

## G. TRAINING

No person shall operate a powered industrial truck until they have been appropriately trained. Operator training shall conform to the all applicable Federal, State, and Local Standards, e.g., Occupational Safety and Health Administration (OSHA), State Labor Codes, and manufacturer's specifications. The following materials may be utilized to develop a company specific Powered Industrial Truck Training Programs:

1. Developing A Training Program For Powered Industrial Truck Operators  
(See **Appendix 2A** - OSHA powered industrial truck training materials.)
2. Sample Outline For Powered Industrial Truck Training Program  
(See **Appendix 6A** - OSHA powered industrial truck training materials.)
3. Visual training aides available upon request from Builders' Association Self-Insurers' Fund Loss Control Services Department.
  - Powered industrial truck training videos by FLI Learning Systems.
  - Printed information for developing overhead transparencies.
    - \* From OSHA powered industrial truck training materials.

# APPENDIX

# Powered Industrial Truck Operator Training

## Standard Summary

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The Occupational Safety and Health Administration (OSHA) is revising its existing requirements for powered industrial truck operator training (codified at 29 CFR 1910.178(1)) and issuing new requirements to improve the training of these operators. The new requirements are intended to reduce the number of injuries and deaths that occur as a result of inadequate operator training. They apply to all industries (general industry, construction, shipyards, marine terminals, and longshoring operations) in which the trucks are being used, except agricultural operations.

These provisions mandate a training program that bases the amount and type of training required on: the operator's prior knowledge and skill; the types of powered industrial trucks the operator will operate in the workplace; the hazards present in the workplace; and the operator's demonstrated ability to operate a powered industrial truck safely. Refresher training is required if: the operator is involved in an accident or a near-miss incident; the operator has been observed operating the vehicle in an unsafe manner; the operator has been determined during an evaluation to need additional training; there are changes in the workplace that could affect safe operation of the truck; or the operator is assigned to operate a different type of truck. Evaluations of each operator's performance are required as part of the initial and refresher training, and at least once every three years.

OSHA estimates that this rule will prevent 11 deaths and 9,422 injuries per year. OSHA estimates that the annualized cost of this rule is approximately \$16.9 million for all affected industries.

**Effective Date:** The effective date is March 1, 1999.

**Compliance Dates:** The dates by which powered industrial truck operators must be trained are shown on the following table.

<b>IF THE EMPLOYEE WAS HIRED:</b>	<b>THE INITIAL TRAINING AND EVALUATION OF THAT EMPLOYEE MUST BE COMPLETED:</b>
Before December 1, 1999	By December 1, 1999
After December 1, 1999	Before the employee is assigned to operate a powered industrial truck.



# **DEVELOPING A TRAINING PROGRAM FOR POWERED INDUSTRIAL TRUCK OPERATORS**

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This handout is intended to be used for training purposes only. It is not a substitute for any provisions of the Occupational Safety and Health Act of 1970, or for any standards issued by the U.S. Department of Labor's Occupational Safety and Health Administration (OSHA).

## **HOW DO I DEVELOP A POWERED INDUSTRIAL OPERATOR TRAINING PROGRAM?**

Before you begin developing your operator training program you should become familiar with the OSHA standard for powered industrial trucks and any operator's manual pertinent to the equipment you have in your workplace.

### **IDENTIFY YOUR OPERATORS**

First, you need to determine the employees that will be required to operate powered industrial trucks in your workplace. If an employee has other duties, but sometimes operates a powered industrial truck, training must be provided.

### **IDENTIFY THE TYPES OF POWERED INDUSTRIAL TRUCKS YOU HAVE IN YOUR WORKPLACE AND THOSE EMPLOYEES WHO WILL BE REQUIRED TO OPERATE THE VEHICLES.**

There are many different types of powered industrial trucks. Typically, these types of vehicles are known as forklifts or lift trucks. Some types of trucks are not capable of being ridden by the operator. These are also covered by the OSHA standard and training is required. Some trucks are fitted with attachments purchased from the manufacturer. The use of these attachments may affect the manner in which the truck is handled; therefore training on the use of the attachment would also be required. If you employees will be expected to operate several different types of powered industrial trucks, then training is required on the unique handling characteristics of the vehicles.

### **METHODS OF TRAINING**

Once you have identified your truck operators and types of trucks you have in your workplace, you should determine the methods of training you will use.

Training must consist of a combination of formal instruction and practical training. Using both methods is the only way to ensure that the trainee receives and comprehends the instruction and uses

the information to safely operate a powered industrial truck. Note that the formal training need not take place in a classroom. Discussions can consist of the trainer talking to the trainee and explaining the training material, either in the workplace or in another location. The training must, however, include an explanatory element as well as a practical element.

Formal instruction may include lectures, conferences, classroom discussions, demonstrations, and written or oral tests. To enhance the training and make it more understandable to the employee, employers and other trainers may use movies, slides, computers, video tapes and other visual presentations.

Using visual aids has several advantages, including:

- 1) The employees being trained remain more attentive, thereby increasing the training's effectiveness;
- 2) The trainer can use visual presentations to ensure that the necessary information is covered during the training;
- 3) Graphical presentations make better use of the training time by decreasing the need for the instructor to carry on long discussions about the instructional material; and,
- 4) Trainees have greater retention of information learned from graphical presentations.

While some employees can learn instructional material while seated in a classroom, other employees may learn best by observing an operation (demonstration) and/or by personally performing an operation (practical exercise). In most cases, a combination of different training methods provides the best training in the least amount of time.

Once you have selected the method of training, then the content of the training program must be considered to include all pertinent training items.

## **TRAINING PROGRAM CONTENT**

Because each type (make and model) of powered industrial truck has different operating characteristics, limitations, and other unique features, a good employee training program for powered industrial truck operators should be based upon the type of vehicles that the employee will be trained and authorized to operate. The training should also emphasize the workplace's features that will affect how the vehicle must be operated. Finally, the training should include the general safety rules applicable to operating any powered industrial truck.

The following is an outline of a generic powered industrial truck operator training program:

- 1) Characteristics of the powered industrial truck(s) the employee will be allowed to operate:
  - a) Difference from the automobile;
  - b) Controls and instrumentation; location, what they do, and how they work;
  - c) Engine or motor operation;
  - d) Steering and maneuvering;
  - e) Visibility;
  - f) Fork and/or attachment adaption, operation, and limitations of their use;
  - g) Vehicle capacity;
  - h) Vehicle stability;
  - i) Vehicle inspection and maintenance the operator will be required to perform;
  - j) Refueling or charging and recharging batteries;
  - k) Operating limitations; and
  - l) Any other operating instruction, warning, or precaution listed in the operator's manual for the type of vehicle the employee is being trained to operate.
  
- 2) The operating environment:
  - a) Floor surfaces and/or ground conditions where the vehicle will be operated;
  - b) Composition of probable loads and load stability;
  - c) Load manipulation, stacking, unstacking;
  - d) Pedestrian traffic;
  - e) Narrow aisle and restricted place operation;
  - f) Operating in classified hazardous locations;
  - g) Operating the truck on ramps and other sloped surfaces that would affect the stability of the vehicle;
  - h) Other unique or potentially hazardous environmental conditions that exist or may exist in the workplace; and
  - i) Operating the vehicle in closed environments and other areas where insufficient ventilation and/or poor vehicle maintenance could cause a buildup of carbon monoxide or diesel exhaust.
  
- 3) The requirements of the OSHA Standard.

After the training program has been completed, the employer must evaluate the trainee's knowledge and skills and determine that the employee is competent to operate the truck safely.

## **EMPLOYEE EVALUATION**

When the employee completes the training exercises and prior to operating the truck in the workplace, an evaluation of the employee must be performed. This evaluation will determine the adequacy of training and the ability of the employee to perform truck operations safely in the workplace. The OSHA standard also requires that an evaluation of the operator's performance be conducted at least once every three years and after refresher training.

The employer should then complete a certification of training record containing 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.

## **REFRESHER TRAINING**

During the course of truck operation, the supervisor may observe the employee performing an unsafe act, such as riding with the load too high or traveling at an unsafe speed. The person making the correction should point out the incorrect manner of operation of the truck or other unsafe act being conducted, tell the employee how to do the operation correctly, and then ensure the employee does the operation correctly. When there have been multiple on-the-spot corrections, the employer may decide to conduct a more structured retraining program, which would include the following information:

- 1) Common unsafe situations encountered in the workplace;
- 2) Unsafe operating methods observed or known to be used;
- 3) The need for constant attentiveness to the vehicle, the workplace conditions, and the manner in which the vehicle is operated.

The above subject areas need to be taught so that the trainee receives all the information needed for safe vehicle operation. Specific details of the above subject areas may be found in the vehicle manufacture's literature, the national consensus standards (e.g., the ASME B56 series of standards (current revisions)), and the OSHA standards relating to powered industrial truck operator training.

# **SAMPLE POWERED INDUSTRIAL TRUCK (PIT) OPERATOR TRAINING PROGRAM OUTLINE\***

1. Introduction
  - a) Overview of the program
  - b) Goal of the program: to provide a training program based on the trainee's prior knowledge, the types of vehicles used in the workplace, and the hazards of the workplace.
  - c) Course will utilize video, group discussion and hands-on practice. Each operator must obtain the knowledge and skills needed to do their job correctly and safely.
2. Types, Features, and Physics
  - a) Familiarize each operator with the basic types and functions of powered industrial trucks.
  - b) Develop an understanding of the information shown on a data plate.
  - c) Understand the critical truck measurements that affect safety.
  - d) Understand the forces that cause tipovers, and the truck design considerations and safety ratings that help prevent them, including the "stability triangle."
3. Inspecting the vehicle
  - a) Understand the purpose and importance of pre-operational checkouts.
  - b) Provide a basic understanding of areas covered during a pre-operational checkout.
  - c) Familiarize each operator with a checklist for pre-operational checkouts, and what to do if a problem is discovered.
4. Driving the Truck
  - a) Understand the elements of safe movement of a powered industrial truck.
  - b) Understand the differences between an automobile and a powered industrial truck.
  - c) Recognize the safety hazards associated with operating a powered industrial.
5. Load Handling
  - a) Understand the elements of load lifting safety.
  - b) Understand the safe operating procedures for raising and lowering loads in aisles.
6. LPG for Lift Trucks
  - a) Discuss LPG and its properties.
  - b) Understand the elements and procedures of safely refueling internal combustion vehicles.
  - c) Describe tank components; service valve, surge valve, relief valve, etc.
  - d) Discuss related safety issues.
7. Battery and Charging
  - a) Understand the elements and procedures of safely changing and charging batteries.
  - b) Discuss filling procedures and maintenance.
  - c) Discuss related safety issues.
8. Safety Concerns
  - a) Review/reinforce potential of serious injury.
  - b) Review/reinforce safety procedures in your facility.

9. Specific Truck and Workplace Training/Hands-On
  - a) Review features of specific PIT's to be operated.
  - b) Review operating procedures of specific PIT's to be operated.
  - c) Review safety concerns of specific PIT's to be operated.
  - d) Review workplace conditions and safety concerns of areas where PIT's will be operated.
  - e) Learn/practice actual operation of specific PIT's to be operated and specific workplace conditions where PIT's will be operated.
  - f) Demonstrate proficiency performing the powered industrial truck operator duties specific to the trainee's position and workplace conditions.
  
10. Certification of Completion of the Course

\*This outline is intended as a resource in implementing a powered industrial truck operator training program. It is not a substitute for any standards issued by the U.S. Department of Labor's Occupational Safety and Health Administration (OSHA).

# PERFORMANCE TEST FOR POWERED INDUSTRIAL TRUCK OPERATORS

EMPLOYEE \_\_\_\_\_ DATE \_\_\_\_\_ TIME \_\_\_\_\_

	<u>CORRECT</u>	<u>INCORRECT</u>	<u>N/A</u>
1. Performed daily inspection.	_____	_____	_____
2. Shows familiarity with truck controls.	_____	_____	_____
3. Gave proper signals when turning.	_____	_____	_____
4. Slowed down at intersections.	_____	_____	_____
5. Sounded horn at intersections.	_____	_____	_____
6. Obeyed signs.	_____	_____	_____
7. Kept clear view of direction of travel.	_____	_____	_____
8. Turned corners correctly-was aware of rear end swing.	_____	_____	_____
9. Yielded to pedestrians.	_____	_____	_____
10. Drove under control and within proper traffic aisles.	_____	_____	_____
11. Approached load properly.	_____	_____	_____
12. Lifted load properly.	_____	_____	_____
13. Maneuvered properly.	_____	_____	_____
14. Traveled with load at proper height.	_____	_____	_____
15. Lowered load smoothly/slowly.	_____	_____	_____
16. Stops smoothly/completely.	_____	_____	_____
17. Load balanced properly.	_____	_____	_____
18. Forks under load all the way.	_____	_____	_____
19. Carried parts/stock in approved containers.	_____	_____	_____
20. Checked bridgeplates/ramps.	_____	_____	_____
21. Did place loads within marked area.	_____	_____	_____
22. Did stack loads evenly and neatly.	_____	_____	_____
23. Did drive backward when required.	_____	_____	_____
24. Did check load weights.	_____	_____	_____
25. Did place forks on the floor when parked, controls neutralized, brake on set, power off.	_____	_____	_____

Evaluator: \_\_\_\_\_ Total Rating: \_\_\_\_\_

# Powered Industrial Truck Training

## Written Test

Name: \_\_\_\_\_

Date: \_\_\_\_\_

Circle True or False for each question.

True or False

- |   |      |       |
|---|------|-------|
| 1. Only trained and authorized operators will be permitted to operate a powered industrial truck.   | True | False |
| 2. Employees are allowed to walk under elevated forks if they wear a hard hat.  | True | False |
| 3. Only loads within the rated capacity of the truck shall be handled.  | True | False |
| 4. A pre-start inspection must be done before every shift.  | True | False |
| 5. Seat belts must always be worn while operating a powered industrial truck.   | True | False |
| 6. Hauling riders is allowed if they have a long walk.  | True | False |
| 7. To safely operate the vehicle, the operator should always check the data plate to determine the maximum allowable weight at the rated load center.                               | True | False |
| 8. When a powered industrial truck is parked the forks must be placed on the floor.   | True | False |
| 9. When picking up a load make sure that the forks extend halfway under the load.   | True | False |
| 10. If a load is blocking your view you should stick your head out to see around the load.  | True | False |
| 11. Drivers should slow down and proceed with caution on wet and slippery floors.   | True | False |
| 12. If at any time, a powered industrial truck is found to be in need of repair, defective or in any way unsafe, the truck will be removed from service until it has been repaired. | True | False |
| 13. Horseplay is never permitted when operating or working around a forklift.   | True | False |
| 14. Center of gravity is a point on an object at which all of the object's weight can be considered to be concentrated.   | True | False |
| 15. Almost all counterbalance powered industrial trucks have a three-point suspension system, these points makeup what is called the stability triangle.                            | True | False |
| 16. A good driver will develop the habit of making fast, sharp turns.   | True | False |
| 17. A driver need not watch the rear end swing of his truck when turning a corner or maneuvering, as it will follow the path of the front wheels.                                   | True | False |
| 18. A load should always be carried high so the operator can see under it.  | True | False |
| 19. An operator should always watch overhead clearances for fire lines, sprinkler heads, conveyers and other obstacles.   | True | False |
| 20. Always keep hands, arms and feet inside the running lines of your vehicle.  | True | False |



**POWERED INDUSTRIAL TRUCK INSPECTION REPORT**

Truck ID# \_\_\_\_\_ Make \_\_\_\_\_ Date \_\_\_\_\_ Shift \_\_\_\_\_

***Place a check (✓) in the correct column if the item is without defect.***

ITEM	Start of Shift	During Shift	End of Shift	Comments if not O.K.
Data Plate				
Lights				
Brakes				
Horn				
Reverse Warning Device				
Steering				
Controls				
Hydraulic System				
Check Fluid Levels				
Tires				
Mast Assembly				
Forks/Adjusting Slides				
Seat Belt				
Exhaust System				
Other				

DEFECTS REPORTED TO: \_\_\_\_\_  
 OPERATOR'S SIGNATURE: \_\_\_\_\_

# POWERED INDUSTRIAL TRUCK TRAINING REPORT

Company Name: \_\_\_\_\_ Date: \_\_\_\_\_

Location: \_\_\_\_\_

Person Conducting Meeting: \_\_\_\_\_

Audio/Video Utilized: \_\_\_\_\_

Additional Comments: \_\_\_\_\_

(Please Print Legibly)

Personnel in Attendance

Social Security Number

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