

15. Powered Industrial Trucks (PIT)

Chapter 296-863 - WAC

1.0 Introduction

This section applies to fire protection, design, and use of powered industrial trucks that use electric motors or internal combustion engines:

- Fork trucks
- Forklifts
- Tractors
- Platform lift trucks
- Motorized hand trucks.

2.0 Operator Selection, Qualifications, and Training

Not every worker should be allowed to operate a powered industrial truck. It is only those employees who are willing and able to be trained that should be permitted to receive Powered Industrial Truck training. The following are guidelines to consider when supervisors select employees who will be allowed to receive the required training and then go on to be certified as an approved Powered Industrial Truck operator.

2.1 Authorization

Only trained and authorized employees shall be permitted to operate a powered industrial truck PIT. The procedure for becoming an operator is as follows:

- Your supervisor must request authorization from the Facilities Management Maintenance Manager to use equipment maintained by Facilities Management. The Maintenance Manager will evaluate the request based on:
 - A demonstrated need throughout the year. An operator must use the PIT at least six (6) times per year on average to qualify.
 - The supervisor's confidence in the employee's ability to operate the equipment safely.
- If approved, the Maintenance Manager will inform the Environmental Health & Safety Manager who will assist the supervisor to schedule operator training.
- Lastly, you must attend training and demonstrate operator competence.

2.2 Operator Qualifications

The supervisor must verify that each potential operator of a powered industrial truck is capable of performing all the duties that are required of the job.

Potential operators may be considered "qualified" to operate a powered industrial truck once they have:

- Received training as defined below, and
- Have been observed operating the truck they will be using by a qualified person
- The operator's performance has been evaluated as to their ability to perform required operations competently.

Having satisfied these requirements, the candidate will be certified by the University as a powered industrial truck operator.

2.3 Training

The content of training may be catered to the operator based on the operator's prior knowledge and skill, the type of truck that will be used by the operator, and the specific workplace hazards to which the operator will be exposed.

An operator must have demonstrated knowledge or training in the following topics.

Truck-related topics, including:

- Operating instructions, warnings, and precautions for the types of truck the operator will be authorized to operate
- Differences between the truck and the automobile
- Truck controls and instrumentation: where they are located, what they do, and how they work
- Engine or motor operation
- Steering and maneuvering
- Visibility (including restrictions due to loading)
- Fork and attachment adaptation, operation, and use limitations
- Vehicle lifting capacity
- Vehicle surface stability
- Any vehicle inspection and maintenance that the operator will be required to perform (See Appendix A for inspection form)
- Refueling and/or charging and recharging of batteries
- Operating limitations: 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

Workplace-related topics:

- Surface conditions where the vehicle will be operated
- Composition of loads to be carried and load stability
- Load manipulation, stacking, and un-stacking
- Pedestrian traffic in areas where the vehicle will be operated
- Narrow aisles and other restricted places where the vehicle will be operated
- Hazardous (classified) locations where the vehicle will be operated
- Ramps and other sloped surfaces that could affect the vehicle's stability
- Closed environments and other areas where insufficient ventilation or poor vehicle maintenance could cause a buildup of carbon monoxide or diesel exhaust
- Other unique or potentially hazardous environmental conditions in the workplace that could affect safe operation

2.4 Refresher Training

- Refresher training is required when:
 - 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
 - The operator is assigned to operate a different type of truck

Note: If an employee is found to be negligent or unsafe in the care and operation of the, then either the Facilities Maintenance Manager or the Environmental Health & Safety Manager may revoke the privilege of using the equipment.

2.5 Three Year Evaluation

The Environmental Health & Safety Manager is responsible for arranging an evaluation of each operator's performance or refresher training at least once every three years as required by WAC 296-863-600.

3.0 Powered Industrial Truck Operation Guidelines

All operators must be aware of these guidelines and follow them. **Operating Near People**

- Powered Industrial Trucks must not be driven up to anyone standing in front of a bench or other fixed object.
- No person is permitted to stand or pass under the elevated portion of any Powered Industrial Truck, whether loaded or empty.
- Authorized personnel may ride on a Powered Industrial Truck, but only if there is a seat with a belt for them to ride.
- Arms or legs must not come between the uprights of the mast or outside the running lines of the Powered Industrial Truck.

3.2 Operating as an Elevated Work Platform

When using, as an **elevated work platform** make sure the following requirements are met:

- The lift cage must be securely attached to the forks.
- The hydraulic system must be safe and in proper operating condition.
- A safety strap should be used, or the control lever locked, to prevent the boom from tilting.
- The operator must stay with the Powered Industrial Truck while workers are on the platform.
- The operator must be seated in a normal operating position while raising or lowering the platform.
- The truck must not travel from point to point while workers are on the platform; inching or maneuvering at very slow speed is permitted.
- Make sure the area between the workers and the mast is adequately guarded to prevent contact with chains or other shear/pinch points.

3.3 Leaving the Powered Industrial Truck Unattended

When leaving a Powered Industrial Truck unattended, fully lower the forks, neutralize controls, shut off power, and set brakes. Wheels must be blocked when the truck is parked on an incline.

A Powered Industrial Truck is considered unattended when:

- The operator is 25 feet or more away from the vehicle.
- The operator leaves the vehicle and it is not in view.

Whenever the operator is off the truck but within 25 feet, with the truck still in view, the forks must be fully lowered, controls neutralized, and the brakes set to prevent movement.

3.4 When the View is Obstructed

- Drive backwards when the load obstructs the view.
- When approaching a blind corner, an aisle, or an area of pedestrian traffic, sound the horn as a courtesy or warning.

3.5 Speed, Height, Stacking & Clearance

- It is the responsibility of the operator to maintain a safe speed at all times.
- Must not be driven with the load in a raised position. The load must be kept close to the ground.
- Pallets placed onto shelving must be firmly supported by both rails. Shelving members and supports must be checked regularly for strength and stability. The load must not exceed the safe maximum storage capacity of the shelving.
- Always make sure there is sufficient headroom to drive under overhead installations, lights, pipes, sprinkler system, etc.
- Fire aisles, access to stairways, and fire equipment must be kept clear.

3.6 Loading Trucks, Trailers...etc.

Brakes must be set and wheel blocks in place to prevent movement of trucks or trailers while loading or unloading. It is the responsibility of the operator to verify that the vehicle has been properly secured from movement before driving onto the vehicle to load or unload it. Fixed jacks are to be used 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 must be checked for breaks and weakness before driving onto them.

3.7 Load Limits

No person is permitted to alter a Powered Industrial Truck to provide additional ballast or counterweight unless it is done in complete conformity to the manufacturer's recommendations. If that cannot be done and the load is too heavy, it must be divided into loads small enough to lift safely.

3.8 Operation Powered Industrial Truck

- If at any time a Powered Industrial Truck (PIT) is found to be in need of repair, defective, or in any way unsafe, the PIT must be taken out of service until it has been restored to safe operating condition.
- Fuel tanks may not be filled while the engine is running. Spillage must be avoided.
- Oil or fuel spills must be carefully cleaned-up with compatible absorbent or completely evaporated and the fuel tank cap must be replaced before restarting the engine.
- No PIT will be operated with a leak in the fuel system.
- Open flames shall not be used for checking electrolyte level in storage batteries or gasoline level in fuel tanks.

3.9 Lighting for Operating Areas

- Controlled lighting of adequate intensity should be provided in operating areas.
- Where general lighting is less than two lumens per square foot, auxiliary directional lighting must be provided on the truck.

3.10 Control of Noxious Gases and Fumes

- Concentration levels of carbon monoxide gas created by PIT operations must not exceed the levels specified in WAC 296-307-62610.
- Questions concerning concentration and methods of sampling to ascertain the conditions must be referred to the campus Environmental Health & Safety Manager.

4.0 Fuels – Hazard Communication

4.1 Liquid Petroleum Gas

- Liquid petroleum gas or LPG is commonly known as propane. Propane is a highly flammable gas. All sources of ignition must be eliminated from the fueling and use area to prevent fire or explosion. Explosive vapors may also travel and ignite at remote locations.
- The ignition temperature of LPG is 874°F. To provide a frame of reference, a cigarette burns between 550 and 1350°F, depending on the draft. An ABC dry chemical fire extinguisher may be used to put out small fires after the fuel source has been controlled.
- In its liquid form, LPG can cause frostbite. Gloves and goggles or safety glasses must be worn when fueling with LPG.
- LPG will replace oxygen in the air. In confined locations, it acts as an asphyxiate by reducing the amount of oxygen available to breath effectively.
- The MSDS for LPG must be maintained in a location that is accessible by all exposed employees.

4.2 Gasoline

- In specific PIT's unleaded gasoline may be used as an alternative to propane. Gasoline is an extremely flammable liquid and vapor, though not as flammable as LPG. Gasoline vapors may travel and ignite at remote locations. An ABC dry chemical fire extinguisher may be used to extinguish small fires after eliminating the fuel source.
- Gasoline is also an extreme health hazard. Ingestion of gasoline may be fatal. Mouth siphoning of gasoline is not permitted. Liquid contact with skin or mucous membranes may cause irritation.
- Overexposure by inhalation and absorption of gasoline may cause damage to the brain, central nervous system, heart, lungs, liver and kidneys. Some compounds in gasoline are known to cause cancer.
- Gasoline replaces oxygen in confined spaces creating an asphyxiation hazard.
- When misting or splashing of gasoline is expected based on the method of use, then goggles or safety glasses and neoprene gloves must be worn as a safety precaution.
- The MSDS for unleaded gasoline must be maintained in a location that is accessible by all exposed employees.