

**INDIANA UNIVERSITY-PURDUE UNIVERSITY at INDIANAPOLIS
IUPUI**

**• Department of Environmental Health and Safety •
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Powered Industrial Trucks

Purpose and Background

The IUPUI Department of Environmental Health and Safety (EHS) has developed this policy to ensure a safe work environment and to protect the health and safety of Indiana University-Purdue University at Indianapolis (IUPUI) staff who operate or maintain powered industrial trucks (PIT). The Occupational Safety and Health Administration (OSHA) per 29 CFR 1910.178 states in part, only trained and authorized operators shall be permitted to operate a PIT.

Scope

The powered industrial truck program applies to all IUPUI departments that operate and/or maintain specialized industrial trucks powered by electric motors or internal combustion engines. This includes any self-propelled materials delivery vehicle or self-propelled fork lift vehicle that the operator walks along with, rides standing on, or rides sitting on.

Policy

All powered industrial trucks (PITs) shall be operated and maintained in accordance with this policy.

Authority and Responsibility

Environmental Health and Safety is responsible for:

1. Reviewing the PIT policy to assure compliance;
2. Coordinating and providing training of affected employees; and
3. Maintaining training records of all operators.

Departmental Supervisors are responsible for:

1. Ensuring employees attend training and operate PITs in a safe manner;
2. Ensuring all equipment is in proper working condition;
3. Assuring operators perform appropriate pre-operation safety inspections and complete log books prior to operating equipment;
4. Scheduling maintenance by outside contractors;
5. Inspecting daily log books on a monthly basis; and
6. Maintaining required documentation.

Employees are responsible for complying with this policy.

General Requirements

General requirements for PITs are as follows:

1. Only trained and authorized operators shall be permitted to operate a PIT;
2. The employee is responsible for ensuring the safe operation of the PIT;
3. Modifications and additions that affect capacity and the safe operation of the PIT shall not be performed by IUPUI employees without the manufacturer's prior written approval. Capacity, operation, and maintenance instruction plates, tags, or decals shall be modified accordingly;
4. If the PIT is equipped with front-end attachments other than factory installed attachments, the PIT shall 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. Nameplates and markings shall be in place and maintained in a legible condition;
6. Department Heads will conduct an assessment of the areas in which powered industrial trucks are used within their departments to determine if specialty designed equipment may be required. Use OSHA Standard 29 CFR 1910.178(c) for reference to determine areas which may be designated hazardous locations. If designated locations exist which require special design and tested industrial trucks, notify IUPUI Department of Environmental Health and Safety (274-2005) for assistance in determining which type of industrial truck to use;
7. All PIT's approved for fire safety purposes must bear a label or other identifying mark indicating approval by the testing laboratory; and
8. Any PIT not in safe operating condition shall be removed from service. All repairs shall be made by authorized personnel. No PIT shall be put back into service until all repairs have been made.

Pre-Operation Safety Inspection

Prior to operating a PIT, the employee shall perform a pre-operation safety inspection using the appropriate Daily Inspection Checklist (Appendix A) provided at facilities that operate PITs and as follows:

1. This inspection shall be made at least daily;
2. When PITs are used on a round-the-clock basis, they shall be examined after each shift;
3. The inspection shall identify any conditions that could affect the safe operation of the PIT;
4. If any unsafe condition(s) exist, the PIT shall be removed from service and tagged "Out of Service" until the proper repairs or concerns are addressed;
5. Upon an operator discovering any concerns, immediately notify the supervisor so he or she can notify the person responsible for the repairs; and

6. Only outside contractors qualified to repair PITs shall perform all repairs and adjustments.

Fuel Handling and Storage

The handling and storage of liquid fuels such as gasoline shall be in accordance with the National Fire Protection Association (NFPA) Flammable and Combustible Liquids Code (NFPA 30).

The handling and storage of liquefied petroleum gas fuel shall be in accordance with the Storage and Handling of Liquefied Petroleum Gases Code (NFPA 58).

The following procedures shall be followed:

1. Battery charging installations shall be located in areas designated for that purpose;
2. When refueling or recharging the batteries of a PIT, the operator shall ensure that the PIT is shut-off and the parking brake is engaged;
3. Facilities shall be provided for flushing and neutralizing spilled electrolyte and for protecting charging apparatus from damage by trucks;
4. Refueling and recharging shall be completed in areas that are designated and well ventilated;
5. Personal protective equipment (approved face shield, goggles, gloves) shall be worn during all refueling and battery recharging operations;
6. For battery charging areas; an emergency eyewash/shower station shall be present in the area;
7. Smoking shall be prohibited in refueling and recharging areas. Fuel vapors and gases, which can escape from the battery and fuel vents, are extremely flammable;
8. Check the level on the battery monthly; and
9. When charging batteries, acid shall be poured into water; water shall not be poured into acid.

Workplace Hazards

Many hazards exist in the workplace that are easily detectable if a survey of the area is conducted. These hazards include, but are not limited to, the following:

1. Overhead obstructions such as fire protection sprinkler piping, ventilation ducts, lighting fixtures, power lines. If the load being moved is carried too high or the PIT mast is raised too high, damage can occur to the overhead obstruction and possibly cause injury to the operator or people in the immediate area;
2. Co-workers or pedestrians traveling to and from certain areas within the facility;
3. Poor housekeeping such as debris left on the floor and wet floors;
4. Poor condition of the floor surface such as uneven concrete, potholes and cracks;

5. Poor visibility around corners. The operator's view from a PIT can be blocked or obstructed by the load. If there is not a clear view, drive in reverse or have a co-worker, "spotter", direct you;
6. Operating a PIT in a confined area with poor ventilation can allow the PIT exhaust gases to accumulate. This creates a hazard not only for the forklift operator, but also for others within the area or building. Environmental Health and Safety shall be contacted to determine air quality if concerns should arise;
7. For individuals who wear eyeglasses, entering a warm atmosphere from a cold atmosphere (driving into a building from the outside) will cause eyeglasses steam up reducing vision; and
8. Driving too fast for the conditions of the area. When operating a PIT, always remain alert and cautious.

Note the existing and potential hazards and conditions that do or could exist in the work environment. Whenever a hazard is discovered which requires action such as housekeeping, poor floor condition or poor ventilation, immediately notify the supervisor to ensure the proper procedures are followed to address the hazards.

Operating Procedures

When operating a PIT, always travel with the forks approximately four inches from the ground so they clear any uneven surfaces. Always survey the area ahead and to the sides when traveling. Always travel in reverse or use a "spotter" when the load being carried obstructs the view.

Some factors that could cause the PIT to tip over:

1. Overloads;
2. Unstable loads;
3. Load not centered on forks;
4. Traveling with the load raised;
5. Sudden stops and starts;
6. Making sharp turns; and
7. Traveling across a ramp or incline.

Safety Practices

The following safety practices shall be adhered to at all times:

1. Wear seatbelts whenever the PIT is equipped with them;
2. Keep all body parts inside the driver's compartment;
3. Drive at appropriate speeds;
4. Do not carry passengers on the PIT;
5. No person shall be permitted to stand or pass under elevated portions of any PIT, whether loaded or empty;
6. All PIT operators working on platforms that are six feet above a lower level shall wear appropriate fall protection devices;
7. When traveling behind other PITs or vehicles, always maintain at least three forklift lengths from the vehicle or PIT ahead, and maintain control of the PIT at all times;

8. Slowly approach ramps and inclines straight, not at an angle;
9. Never turn the PIT while on a ramp or incline;
10. When parking a PIT and prior to dismounting or leaving the unit, shut-off the power. The operator shall never leave a running PIT unattended;
11. When the PIT is left unattended, the load shall be fully lowered, controls shall be neutralized, power shut off, brakes set and wheels blocked if PIT is parked on an incline;
12. Never park a PIT in front of any fire protection equipment, emergency exits, or in a manner that would obstruct a person from exiting the area;
13. If at any time during operation a PIT is found to be in need of repair, defective, or in any way unsafe, it shall be immediately removed from service. The department supervisor shall be notified so he or she can notify the person responsible for the repairs; and
14. Refueling and recharging areas equipped with emergency eyewash stations shall be inspected on a weekly basis.

Training

University employees and outside contractor employees designated to operate a powered industrial truck shall be required to participate in and successfully complete a PIT training program approved by the Department of Environmental Health and Safety (EHS) to ensure the operator is competent to operate a PIT safely before assuming their responsibilities.

The supervisor shall ensure that each powered industrial truck operator is competent to operate a powered industrial truck safely.

Prior to permitting an employee to operate a powered industrial truck (except for training purposes), the supervisor shall ensure that each operator has successfully completed the IUPUI Lift Truck Operator required training and has a valid Operator Certification Card.

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.

Training consists of a combination of formal instruction and practical training. Formal instruction includes lecture, interactive discussion, video, and written material handouts. Practical training includes demonstrations performed by the trainer, practical exercises performed by the trainee, and evaluation of the operator's performance in the workplace.

Trainees may operate a powered industrial truck only:

- Under the direct supervision of persons who have the knowledge, training, and experience to train operators and evaluate their competence; and
- Where such operation does not endanger the trainee or other employees.

Curriculum

The curriculum of the training program shall, at a minimum, address the following topics:

1. Pre-Operation Safety Inspection;
2. Workplace Hazards;
3. Safe Driving and Operating Procedures;
4. Loading-Carrying-Unloading of Materials; and
5. Operation and Safety Driving Practical.

Refresher Training

Employees shall be required to participate in refresher training at least once every three years. Retraining may also be deemed necessary when it has been documented that the operator has been observed to operate the PIT in an unsafe and/or inappropriate manner, involved in an accident or near miss incident, is assigned to drive a different type of PIT, or a condition in the workplace changes in a manner that could affect safe operation of the PIT as directed by this policy and according to OSHA regulations.

Refresher training shall consist of practical exercises performed by the trainee, and evaluation of the operator's performance in the workplace.

Glossary

The term "powered industrial truck" is defined in the ASME B56.1 (formerly the ANSI B56.1) standard as a "mobile, power propelled truck used to carry, push, pull, lift, stack, or tier material." Vehicles that are used for earth moving and over-the-road hauling are excluded.

Powered industrial trucks are classified by their manufacturers according to their individual characteristics. There are seven classes of powered industrial trucks:

Class 1--Electric Motor, Sit-down Rider, Counter-Balanced Trucks (Solid and Pneumatic Tires).

Class 2--Electric Motor Narrow Aisle Trucks (Solid Tires).

Class 3--Electric Motor Hand Trucks or Hand/Rider Trucks (Solid Tires).

Class 4--Internal Combustion Engine Trucks (Solid Tires).

Class 5--Internal Combustion Engine Trucks (Pneumatic Tires).

Class 6--Electric and Internal Combustion Engine Tractors (Solid and Pneumatic Tires).

Class 7--Rough Terrain Forklift Trucks (Pneumatic Tires).