



POWERED INDUSTRIAL TRUCK (PIT) SAFETY PROGRAM (OSHA 29 CFR 1910.178)		
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Revision Date: 3/4/25	Author: William Depetro	Revised By: Joshua Smith

Objective: Accidents resulting from powered industrial truck operation can result in severe personal injury or death, major property damage and major damage to university assets. This poses a serious problem for workers and their employer. The OSHA Powered Industrial Trucks Standard establishes uniform requirements to make sure that hazards associated with the use of Powered Industrial Trucks are evaluated, and that this hazard information and training is transmitted to all affected workers.

Case Western Reserve University will ensure that the requirements of the OSHA Standard for powered industrial trucks will be adhered to. This program of instruction in standard practices and procedures applies to all staff members who operate and/or are responsible for forklifts and/or powered industrial trucks. Powered industrial trucks include forklifts, platform lift trucks, motorized hand trucks and other specialized industrial trucks powered by electric or internal combustion engines.

Contractors operating powered industrial trucks on university projects are expected to meet or exceed the requirements found in this program, and comply with all applicable statutes and regulations governing the use of powered industrial trucks

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1.0 Definitions

Powered Industrial Truck: Any mobile power-propelled truck used to carry, push, pull, lift, stack or tier materials. Powered industrial trucks can be ridden or controlled by a walking operator. Commonly known as forklifts, pallet trucks, rider trucks, fork trucks or lift trucks. Excluded are vehicles used for earth moving and over-the-road hauling. Equipment that was designed to move earth but has been modified to accept forks are also excluded.

2.0 Responsibility

- 2.1 **EHS** is responsible for:
 - Updates and revisions to the written program and a yearly review of the program
 - Ensures the program meets applicable industry standards
 - Provides program oversight
 - Provide Training and maintaining records
 - CWRU has expressly authorized EHS safety officers to halt any operation where there is danger of serious personal injury
- 2.2 **Department Supervisors-** Supervisors or heads of areas where PIT equipment is operated are responsible for:
 - Designating and Identifying personnel authorized to operate PIT equipment.
 - Ensuring Authorized operators have received proper training
 - Ensuring that PIT equipment is properly maintained in proper working order.
- 2.3 **Authorized Operators** are responsible for:
 - Attending and passing classroom and hands on competence training
 - Performing and documenting PIT pre use inspections
 - Reporting vehicle maintenance issues to supervisors and removing equipment from service if needed.
 - Operating equipment in a safe manner and adhering to this program at all times.

3.0 Vehicle Requirements

- 3.1 No modifications or additions which affect capacity and safe operation shall be performed without the manufacturers' prior written approval. Capacity, operation, maintenance instruction plates, tags, or decals shall be changed accordingly.
- 3.2 If the truck is equipped with front-end attachments other than factory

installed attachments, the truck will be marked to identify the attachments and show the approximate weight of the truck and attachment combination at maximum elevation with load laterally centered.

- 3.3 All nameplates and markings will be verified as being in place and maintained in a legible condition and shall meet the requirements established by ANSI B56.1
- 3.4 When it is needed to determine a proper configuration to purchase a powered industrial truck, Case Western Reserve University will adhere to the following guidelines. The atmosphere or location where the truck will be used will have to be classified as to whether it is hazardous or non-hazardous prior to the consideration of the type industrial truck to be purchased. 29 CFR 1910.148 and the proposed manufacturer should be consulted to determine the most suitable vehicle. The following is a list of designation types.

Designation	Description
“D”	Diesel powered
“DS”	Diesel engine powered with additional safeguards to the exhaust, fuel and electrical systems
“DY”	Diesel engine powered with the safeguards of the DS units AND do not have any electrical equipment and are equipped with temperature limitation features
“E”	Electrically powered
“ES”	Electrically powered with additional safeguards to prevent emission of hazardous sparks
“EE”	Electrically powered with the safeguards of ES units AND all electrical equipment is completely enclosed
“EX”	Electrically powered with the safeguards of ES and EE, AND are constructed to be used in atmospheres containing flammable vapors or dusts
“G”	Gasoline engine powered
“GS”	Gasoline powered with additional safeguards to the exhaust, fuel and electrical systems
“LP”	Liquefied petroleum gas powered
“LPS”	Liquefied petroleum gas powered with additional safeguards to exhaust, fuel and electrical systems

4.0 Training requirements

- 4.1 Before an employee can begin operating equipment, they must receive an initial PIT training. This ensures that the program and procedures are understood before the operator begins their work duties. Training is offered by Environmental Health and Safety and is both site and equipment specific.
- 4.2 Initial Training: Training must consist of both formal classroom instruction followed by a practical evaluation.
- 4.3 Formal instruction includes lectures, discussions, videos and or written training.
- 4.4 Practical Evaluation includes a demonstration performed by the trainer and practical exercises performed by the trainee in order to ensure competence. This should simulate typical work that the operator will be expected to conduct and includes pre-use inspections.
- 4.5 Operator certifications are valid for 3 years. Refresher training may be needed if any of the following circumstances occur:
 - Operator observed operating in an unsafe manner
 - Operator involved in an accident or near miss
 - Operator fails the practical evaluation
 - There is a change in workplace procedures
 - There is a change in the type of vehicle utilized.
 - a period of inactivity has elapsed since the last time an operator performed PIT tasks.

If an operator has previously received initial training, the recertifying process requires only the practical evaluation. Any employee that refuses training will not be permitted to operate PIT equipment.

5.0 Operating Procedures

- 5.1 Trucks shall not be driven up to anyone standing in front of a fixed object.
- 5.2 No person shall be allowed to stand or pass under the elevated portion of any truck, whether loaded or empty.
- 5.3 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.

- 5.4 Arms or legs are prohibited from being placed between the uprights of the mast or outside the running lines of the truck.
- 5.5 When a powered industrial truck is left unattended, loads shall be fully lowered, controls will be neutralized, power shut off, and brakes set. Wheels will 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 is dismounted and within 25 ft. of the truck still in his view, any load shall be fully lowered, controls neutralized, and the brakes set to prevent movement.
- 5.6 A safe distance shall be maintained from the edge of ramps or platforms while on any elevated dock, platform, or freight car. Trucks will not be used for opening or closing freight doors.
- 5.7 Brakes will be set and wheel blocks 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 and trailers will be checked for breaks and weakness before they are driven onto.
- 5.8 The operator will ensure sufficient headroom under overhead installations, lights, pipes, sprinkler system, etc. before operating the vehicle in these areas.
- 5.9 An overhead guard will 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.
- 5.10 A load backrest extension will be used whenever necessary to minimize the possibility of the load or part of it from falling rearward.
- 5.11 Only approved industrial trucks will be used in hazardous locations.
- 5.12 Whenever a truck is equipped with vertical only, or vertical and horizontal controls elevatable with the lifting carriage or forks for lifting personnel, the following additional precautions will be taken for the protection of personnel being elevated.

- Use of a safety platform firmly secured to the lifting carriage and/or forks.
- Means shall be provided whereby personnel on the platform can shut off power to the truck.
- Such protection from falling objects as indicated necessary by the operating conditions will be provided.

5.13 Fire aisles, access to stairways, and fire equipment will be not be obstructed at any time.

5.14 General requirements. Operators:

- 5.14.0 All operators must be at least eighteen (18) years of age.
- 5.14.1 Operators will obey Plant/Site speeds and other traffic regulations at all times.
- 5.14.2 Operators will operate loaded trucks with forks no more than 6-8 inches above the ground, with the load carried low and tilted back.
- 5.14.3 Operators will not raise or lower loads while moving.
- 5.14.4 Operators will not carry anything on the overhead guard.
- 5.14.5 Operators will use all plant/Site observation mirrors
- 5.14.6 Operators will ensure vehicle sound/illuminated warning devices are operational.
- 5.14.7 Operators will yield right of way to pedestrians, emergency vehicles, and avoid pedestrian lanes.
- 5.14.8 Operators will drive cautiously on uneven or slippery surfaces.
- 5.14.9 Operators will ensure the load is pointed uphill where the gradient is greater than 10 percent.
- 5.14.10 Operators will ensure fire protection equipment is carried with the vehicle and is in proper working order.

5.15.8 The Operator will not engage in stunt driving or horseplay.

5.15 Pre-start requirements. Operators:

5.15.1 Prior to use, operators must complete a pre-use inspection to ensure safe operation of equipment. This inspection must be completed before each shift and must include:

- Identification of the PIT equipment
- Name of the person conducting the inspection
- Date and time of the inspection
- Inspection of equipment when it is powered down and controls once it is powered on.
- Appendix A provides a sample checklist that highlights the areas that must be examined prior to use.

5.15.2 The Operator will remove the truck from service any time it is found to be deficient and report the issue to their supervisor. It will remain out of service until such time that repairs are made by an authorized mechanic.

5.15.3 The Operator will check for leaks and perform necessary operator maintenance before starting vehicle.

5.15.5 The Operator will ensure they know the load capacity and stay within it.

5.15.6 The Operator will be cognizant of the planned route and aware of areas with inadequate headroom, lighting, obstructions, and floor surface problems.

5.15.7 The Operator will wear the same level of personal protective equipment as the personnel they are directly working with.

5.15.9 The Operator will slow down for wet and slippery floors.

5.15.10 The Operator will properly secure dockboard or bridgeplates before they are driven over. Dockboard or bridgeplates will be driven over carefully and slowly and their rated capacity never exceeded.

- 5.15.11 The Operator will approach any elevators slowly, and then enter squarely after the elevator car is properly leveled. Once on the elevator, the controls shall be neutralized, power shut off, and the brakes set until the desired level is reached.
- 5.15.12 Motorized hand trucks must enter elevators or other confined areas with load end forward.
- 5.15.13 Driving over loose objects on the roadway surface shall be avoided.
- 5.15.14 When negotiating turns, speed shall be reduced to a safe level by means of turning the hand steering wheel in a smooth, sweeping motion. Except when maneuvering at a very low speed, the hand steering wheel shall be turned at a moderate, even rate.
- 5.15.15 The Operator will use extreme care tilting the load forward or backward, particularly when high tiering. Tilting forward with load engaging means elevated, shall be prohibited except to pick up a load. An elevated load shall not be tilted forward except when the load is in a deposit position over a rack or stack. When stacking or tiering, only enough backward tilt to stabilize the load shall be used.

5.16 Loading/Unloading requirements. Operators:

- 5.16.1 The Operator will ensure load is within the trucks rated capacity.
- 5.16.2 The Operator will place load squarely on forks until load touches carriage.
- 5.16.3 The Operator will ensure load is stable and centered on forks, and stack or tie loose or uneven loads (or ensure proper personnel accomplish this prior to loading).
- 5.16.4 The Operator will secure the vehicle when not in use to prevent unauthorized personnel from operating the vehicle.
- 5.16.5 The Operator will tilt the mast back to lift load.
- 5.16.6 The Operator will proceed straight into trailers or railcars to

load/unload.

- 5.16.7 The Operator will ensure if loading/unloading onto trucks that the wheels are chocked, brakes are engaged, and loading platform is positioned properly.
- 5.16.8 The Operator will ensure if loading/unloading racks, the proper safe weight or height-to-load ratio is maintained.
- 5.16.9 The Operator will ensure if loading/unloading onto or from stacked materials the proper safe weight or height-to-load ratio is maintained.

5.17 Parking requirements. Operators:

The Operator must select flat parking surfaces, away from traffic where the vehicle does not block, doors, pedestrian routes, aisles, and exits. When parked, key should be removed and (where applicable) LP tanks should be shut off.

5.18 Refueling requirements. Operators:

- 5.18.1 Refuel only in assigned, ventilated areas containing no ignition sources.
- 5.18.2 Turn off engine.
- 5.18.3 Have fire suppression and cleanup equipment available.
- 5.18.4 Extinguish smoking materials.
- 5.18.5 Use acid-resistant material-handling equipment and wear corrosion-resistant PPE during battery charging/charging.
 - Remove battery cap slowly and leave open.
 - Pour acid into water, not water into acid.
- 5.18.6 Follow the vehicle manufacturer's instructions for gas or propane fueling.
- 5.18.7 Never use open flame to check fuel level.
- 5.18.8 Try to prevent spills, clean any spills promptly, replace fuel cap before starting or moving vehicle.

- 5.18.9 Take empty propane tanks to an authorized compressed gas container disposal/storage area and follow Case Western Reserve University policy for disposal/storage.

6.0 Maintenance

- 6.1 Any PIT equipment found unsafe for operation must be immediately removed from service.
- 6.2 Maintenance shall not be performed in a hazardous location
- 6.3 Lockout/Tagout procedures must be followed to control hazardous energy during maintenance operations.
- 6.4 Repairs must be performed by an authorized technician and must be logged with the date and work that was completed.
- 6.5 PIT equipment must be deemed safe for operations to resume and for it to enter back into service.

7.0 Recordkeeping

- 7.1 **EHS:**
- Shall maintain records of training that has been provided, listing the date it occurred, the name of the operator, and the specific equipment they are permitted to operate.
 - Updates to the PIT program will occur on an as-needed basis and the program will be reviewed annually.
- 7.2 **Department heads/supervisors:**
- Shall maintain pre-use inspection logs for all PIT equipment.
 - Keep maintenance records for PIT equipment.
 - Accident reports involving PIT equipment

Forklift Daily Checklist	FOR THE WEEK OF: / /				TRUCK #		
VISUAL EXAM	MON.	TUE.	WED.	THU.	FRI	SAT.	SUN.
Engine							
Crankcase oil							
Belts							
Wires							
Fuel line							
COMPONENTS							
Fuel Tank							
LPG tank straps							
Brake Fluid							
Hydraulic Fluid							
Hydraulic Lines							
Tires, Wheels, Rims							
Forks							
Mast Chains							
Gauges: Temp, Hour, Speed, Battery							
BODY							
Lights, Head							
Lights, Tail							
Lights, Signal							
Lights, Warning							
Fire Extinguisher							
Seat							
Seat Belt							
Overhead Cage							
Operating Instructions							
Lifting Capacity							
OPERATIONAL							
Horn							
Back-Up Warning Device							
Steering							
Parking Brake							
Gear Shift Lever							
Transmission							
Mast Lift Up/Down							
Mast Tilt							
Mast Side/Squeeze							
<div>OK = ✓</div> <div>Not Applicable = N/A</div> <div>Not OK = X</div>							
SIGNATURE OF INSPECTORS FOR EACH DAY:							
MONDAY				FRIDAY			
TUESDAY				SATURDAY			
WEDNESDAY				SUNDAY			
THURSDAY							