

Powered Industrial Truck (Forklift) Safety Program

Responsible Administrator: EHS Safety Specialist

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Summary: This section outlines the policy and procedures related to the Powered Industrial Truck (Forklift) Safety Program that is administered through the Environmental Health and Safety (EHS) Department.

1. Program Description	1
2. Scope.....	1
3. Definitions	1
4. Responsibilities	2
5. Program Components.....	3
6. Reporting Requirements	4
7. References	4

[Appendix A - FORKLIFT PRE-USE INSPECTION CHECKLIST](#)

1. Program Description

This written Powered Industrial Truck (PIT) Safety Program establishes guidelines to be followed whenever any University employees work with powered industrial trucks (Forklifts) at this campus. The guidelines established are to be followed to:

- Provide a safe working environment,
- Govern operator use of powered industrial trucks, and
- Ensure proper care and maintenance of powered industrial trucks.

It is the intent of the University to comply with the requirements of Cal/OSHA Title 8, §3650 Industrial Trucks. These regulations have requirements for PIT operations, including those for battery care and charging.

2. Scope

The procedures here establish uniform requirements designed to ensure that PIT safety training, operation, and maintenance practices are communicated to and understood by all affected employees. These requirements also are designed to ensure that procedures are in place to safeguard the health and safety of all persons on campus including faculty, staff, students, and visitors.

All PIT equipment used for material handling is covered under this program, including sit-down type forklifts, stand-up forklifts, straddle trucks, narrow isle lift trucks, walk behind forklifts, pallet jacks, etc. The Powered Industrial Truck Safety Program guidelines apply to University/Department owned powered industrial trucks, as well as all trucks rented, leased, or borrowed on a temporary basis and used by University personnel.

3. Definitions

Attachment - A device, other than conventional forks or load backrest extensions, mounted permanently or temporarily on the PIT for handling the load.

Counterbalanced Lift Truck – A PIT equipped with load engaging means wherein all the load during normal transporting is outside the area formed by the wheel contacts.

Fork Height - The vertical distance from the floor to the load carrying surface of the forks with mast vertical.

Forklift Truck - A high lift self-loading PIT equipped with a load carriage and forks for transporting and/or stacking loads.

Free Lift Height - The attainable fork height before the stated overall lowered height of the mast is exceeded by any standard part of the forks, mast or carriage assemblies, when loaded.

High-Lift Truck – A PIT equipped with a power-operated lifting device used for the transportation, stacking, and positioning of loads.

Lift - The vertical travel of the carriage with mast vertical

Lift Speed - The average velocity in feet per minute when raising the load carriage throughout its operating range, specified as empty and/or loaded.

Load Backrest Extension - A removable structure extending vertically from the carriage frame to provide increased support and stability for unusually high loads.

Load Center - The point at which the center of load (i.e., center of gravity) is placed ahead of the fork face or equivalent (attachment) with the load resting on the forks.

Maximum Fork Height - The fork height attainable with the mast at the fully elevated position

Overhead Guard - A framework fitted to a PIT over the head of a riding operator.

Powered Industrial Truck – Also known as a PIT, a mobile power-driven truck used for hauling, pushing, or lifting materials where normal work is normally confined within the boundaries of a place of employment.

Rated Capacity - The maximum weight, expressed in pounds, at given load center, that a PIT can safely transport and/or stack to a specified height when equipped with a standard mast, carriage and forks. The rated capacity is based on the strength of the various truck components and the amount of counterweight.

Telescoping Mast - A multiple mast wherein one member is stationary and the other(s) movable vertically with respect to the stationary member and supporting the fork carriage in its vertical movement. This mast permits maximum lifts substantially greater than the overall lowered height.

Tilt - The amount by which the mast structure, forks and carriage may be tipped beyond the vertical position, forward or backward.

4. Responsibilities

Department

Departmental supervisors:

- Shall designate and identify employees responsible for operating powered industrial trucks
- Shall ensure that no employee under their direction operates a PIT without proper training and certification.
- Shall ensure that powered industrial trucks are repaired when malfunctioning.

UC Irvine Employees and Students

PIT operators:

- Shall attend and pass forklift safety training and evaluation before operating a PIT/forklift and at least every three years thereafter;
- Shall operate and maintain powered industrial trucks in a safe manner and according to the training provided;
- Shall possess a valid driver's license.
- Shall report all vehicle problems to his/her supervisor.

Environmental Health and Safety (EHS)

- Shall provide program oversight;
- Shall provide PIT/forklift safety training and certify that each operator has been trained and evaluated as required.
- Shall review annually the UCI Powered Industrial Truck Safety Program.

5. Program Components

A. Inspection

- A pre-use inspection of the PIT must be performed by the operator before each use (See [Appendix A - FORKLIFT PRE-USE INSPECTION CHECKLIST](#))
- The inspection has two components: the "Visual Checks," and the "Operational Checks"
- The visual check should include, at minimum, the inspection of the frame, forks, carriage, tires, overhead guard, hydraulic hoses, chains, safety equipment, safety decals, and overall appearance.
- Operators should perform operational checks that include ensuring the horn, lights, audible warning, brakes, control levers, steering, and safety equipment are fully functional and in good condition.

B. Forklift Operation

- Only employees who are trained in the safe operation of forklifts are permitted to use the forklift
- Always wear seatbelts if available
- Never place any part of the body outside the running lines of the forklift or between mast uprights
- Never allow others to stand, pass, or work under the elevated portion of the forklift
- Riders are not permitted on vehicle.
- Always keep a safe speed and distance while driving
- Always keep checking for obstacles or pedestrians
- Operators must be able look in the direction of travel. If load is obstructing view, operators must travel in the reverse direction. Always "cradle the load"
- Sound horn at blind spot intersections or to alert pedestrians
- Ascend or descend a grade slowly with the load upgrade.
- Turn engine off, lower forks, set brakes and remove key when operator is away from forklift.
- Do not operate on floors, sidewalks, platforms, or elevators that will not safely support loaded vehicle.

- C. Load Handling
 - Take special precaution when securing and handling loads.
 - Know truck load capacity.
 - Make sure load is secured on pallet.
 - During transport, carry load 6-8 inches off the ground.
 - Take extreme care when tilting loads.
 - Always slow down and ensure load is lowered when turning corners.
- D. Emergency: Tip Over
 - In case vehicle starts to tip-over:
 1. **HOLD TIGHT TO STEERING WHEEL**
 2. **BRACE FEET**
 3. **LEAN AWAY FROM THE DIRECTION OF THE FALL**
 4. **NEVER JUMP OUT OF THE FORKLIFT.**

6. Reporting Requirements

- All powered industrial trucks used by University employees are required to meet the design and construction requirements for powered industrial trucks established in the American National Standards Institute (ANSI) Standard for Powered Industrial Trucks, Part II, ANSI B56.1, except for vehicles intended primarily for earth moving or over-the-road hauling. Approved trucks are required to bear a label or some other identifying mark indicating approval by the testing laboratory.
- Nameplates and markings must be in place, must not be covered over with paint which may obscure the identification information, and the nameplates must be maintained in a legible condition.
- Modifications and additions which affect capacity and safe operation without the manufacturer's prior written approval are prohibited. Capacity, operation, and maintenance instruction plates, tags, or decals should be modified accordingly.
- Power-operated industrial trucks shall not be used in atmospheres containing hazardous concentrations of dust or where flammable gases or vapors are, or may be, present in quantities sufficient to produce explosive or ignitable mixtures. If the location is believed to be hazardous or contain any hazardous materials, EHS should be consulted in advance.
- High lift rider trucks must be equipped with an overhead guard, unless operating conditions do not permit the use of the guard. The overhead guard is intended to offer protection from the impact of small packages, boxes, bagged material, etc., but not to withstand the impact of a falling capacity load.
- All new low lift and high lift trucks manufactured after June 26, 1998, through March 15, 2009 shall be labeled as meeting the design and construction requirements of Part III, ASME B56.1-1993, Safety Standard for Low Lift and High Lift Trucks or Part III of the ANSI/ITSDF B56.1-2005 standard. All low lift and high lift trucks manufactured on or before June 26, 1998, shall be labeled as meeting either the design and construction requirements of the ASME standard indicated above or Part II, of the ANSI B56.1-1975 standard.

7. References and Appendices

Cal/OSHA Title 8, [§3650](#) Industrial Trucks
ASME B56.1-1993, Safety Standard for Low Lift and High Lift Trucks
[Appendix A - FORKLIFT PRE-USE INSPECTION CHECKLIST](#)

APPENDIX A

FORKLIFT PRE-USE INSPECTION CHECKLIST

Daily Lift Truck Inspection Checklist							
Operator's Signature				Date:			
Lift Truck Number:			Type:				
OPERATOR MUST COMPLETE CHECKLIST AT START OF SHIFT <i>Maintain in files</i>							
Hour Meter Reading:							
Check each of the areas that pertain to your lift truck							
Visual Checks	OK	Service Date	N/A	Operational Checks	OK	Service date	N/A
Tire Condition				Horn			
Head/Tail Lights				Steering			
Warning Lights				Service Brake			
Fluid levels/Battery				Hydraulic Controls			
Battery Plug Condition				Hose Reel			
Battery Indicator				Engine			
Seatbelts				Mast			
Forks				Attachment			
Mirrors							
Overhead Guard							
Other Gauges							
Fluid Leaks							