



Provo, Utah

FORKLIFT SAFETY PROGRAM

Table of Contents

Section	Page
1.0 Overview.....	3
2.0 Policy	3
3.0 Requirements	3
4.0 Purpose	3
5.0 Scope.....	4
6.0 Procedures.....	4
7.0 Responsibilities	7
8.0 Training Requirements.....	8
9.0 Monitoring	10
10.0 Appendices	11

Appendices	Page
Appendix A Pre-Use Inspection Checklist	11

1.0 Overview

Material handling is a significant safety concern. During the movement of products and materials, there are numerous opportunities for injuries and property damage. Powered industrial trucks, better known as forklifts, pallet jacks and stand-up riding reach trucks are essential tools in handling materials. This document has been created to minimize the risk of injury to operators, bystanders, and to avoid damaging university property. Departments assigned this equipment will utilize this program to increase operator awareness of recognized safety standards. Qualified trainers will be used to provide all training activities. Written records will be kept in the respective departments and by Risk Management and Safety to document all training. Specific responsibilities for monitoring the effectiveness of this program are assigned to departments, supervisors, operators, and Risk Management and Safety. This document, will be reviewed annually by Risk Management and Safety, and those departments affected by its requirements. The annual review will assess the current level of program compliance, the programs effectiveness in reducing injuries and property damage, and address program improvements.

2.0 Policy

Departments assigned powered industrial trucks must ensure that supervisors and operators comply with all aspects of this safety program. All university employees must successfully complete this training program, and receive certification prior to the operation of any powered industrial truck. 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 statues and regulations governing the use of powered industrial trucks as listed in Section 3.0 of this document.

3.0 Requirements

- OSHA Standard 29 CFR § 1910.178.
- Valid driver's license and good driving record.
- No uncorrectable adverse vision problems.
- No uncorrectable adverse hearing loss.
- No physical limitations that would impair safe operation of the powered industrial truck.
- No neurological disorders that affect balance or consciousness.
- No medication use that affects perception, vision, or physical abilities.

4.0 Purpose

This program has been developed to reduce the risk of physical injury or property damage in areas where powered industrial trucks are in operation. It also brings the university into compliance with federal, state, and local law.

5.0 Scope

This program applies to the operation of all powered industrial trucks, forklifts, tractors, platform lift trucks, motorized hand trucks, and other specialized industrial trucks powered by electric motors or internal combustion engines by university employees and contractors, engaged in university projects.

6.0 Procedures

6.1 Pre-Use Inspection

- Prior to the operation of any powered industrial truck the Pre-Use Inspection Checklist found in Appendix A must be completed. This applies at the beginning of every work period, and whenever a new equipment operator takes control of the powered industrial truck.
- Any safety defects (such as hydraulic fluid leaks; defective brakes, steering, lights, or horn; and/or missing fire extinguisher, lights, seat belt, or back-up alarm) must be reported for immediate repair. They must also be locked and tagged, and taken out of service.

6.2 Operation

- Operators must wear seatbelts at all times.
- Powered industrial truck operators must wear hard hats in areas where overhead hazards exist.
- Operators must sound the horn and use extreme caution when meeting pedestrians, making turns, and cornering.
- Passengers are not allowed to ride on an industrial truck, unless the truck has an extra seat that allows the passenger to buckle-up while riding.
- Arms or legs may not be placed between the uprights of the mast or outside the running lines of the truck.
- Persons are not allowed to stand or pass under any elevated portion of a truck.
- If powered industrial trucks are used to elevate persons then an appropriate man lift platform (cage with standard rails and toe-boards) that is attached to the mast must be used.
- Trucks must not be driven up to anyone standing in front of a fixed object.
- Travel-ways must be maintained free from obstructions, aisles must be marked, and wide enough (six-foot minimum) for vehicle operation.
- A safe distance must be maintained from the edge of ramps or platforms while on any elevated dock, platform, or freight car. Trucks must not be used for opening or closing freight doors.
- Maintain sufficient headroom under overhead installations such as: lights, pipes, sprinkler systems, etc.
- An overhead guard must be used as protection against falling objects.
- A load backrest extension must be used whenever necessary to minimize the possibility of the load or part of it from falling rearward.

- Lift capacity must be marked on all powered industrial trucks. Operators must assure the load does not exceed rated weight limits.
- Rail cars and trailers must be parked squarely to the loading area and have wheels chocked in place. Operators must follow established docking/undocking procedures.
- When a powered industrial truck is left unattended (more than 25ft. away or out of sight), load engaging means must be fully lowered, controls neutralized, power shut off, and brakes set. Wheels must be blocked if the truck is parked on an incline.
- All powered industrial trucks (with the exception of pallet jacks) must be equipped with a multi-purpose dry chemical fire extinguisher.
- All modifications must be approved by the manufacturer, and new rated load capacities determined and posted on the truck. Written approval is required.
- Operators must report all accidents, regardless of fault and severity, to their Supervisor.

6.3 Loading

- Only handle loads within the rated capacity of the truck.
- Loads should be safely arranged, stable, and centered – always use caution when handling loads. Adjust long or high (including multiple-tiered) loads that may affect capacity.
- Trucks equipped with attachments must be operated as partially loaded trucks even when not handling a load.
- A load engaging means must be placed under the load as far as possible. The mast must be carefully tilted backward to stabilize the load.
- Use extreme care when tilting the load forward or backward, particularly when high tiering. Tilting forward with load engaging means elevated is prohibited except to pick up a load. An elevated load may not be tilted forward except when the load is in a deposit position. When stacking or tiering, use only enough backward tilt to stabilize the load.

6.4 Trucks and Railroad Cars

- Check the flooring of trucks, trailers, and railroad cars for breaks and weakness before driving onto them.
- The brakes of highway trucks must be set and wheel chocks placed under the rear wheels to prevent the trucks from rolling while they are boarded with powered industrial trucks.
- Wheel stops or other recognized positive protection must be provided to prevent railroad cars from moving during loading or unloading operations.
- Fixed jacks are necessary, and must be deployed, to support a semi trailer and prevent upending during loading or unloading when the trailer is not coupled to a tractor.
- Positive protection must be provided to prevent railroad cars from being moved while dock boards or bridge plates are in position.

6.5 Traveling

- All traffic regulations must be observed, including authorized speed limits and yielding to pedestrians. A safe distance must be maintained, approximately three truck lengths from the truck ahead, and the truck must be kept under control at all times.
- The right of way must be yielded to ambulances, fire trucks, or other vehicles in emergency situations.

- Do not pass other trucks traveling in the same direction at intersections, blind spots, or other dangerous locations.
- The driver must slow down and sound the horn at cross aisles and other locations where vision is obstructed.
- If the load being carried obstructs forward view, the driver must travel with the load trailing.
- Loads must be tilted back and carried no more than four inches above the ground.
- Railroad tracks must be crossed diagonally wherever possible. Parking closer than eight feet from the center of railroad tracks is prohibited.
- The driver must look in the direction of and keep a clear view of the path of travel.
- Grades must be ascended and descended slowly. Position the load uphill relative to the operator when ascending or descending grades.
- Stunt driving and horseplay are prohibited.
- When loading rail cars and trailers, dock plates must be used. And, dock board or bridge plates must be properly secured before they are driven over. Dock board or bridge plates must be driven over carefully and slowly and their rated capacity never exceeded.
- Avoid running over loose objects on the roadway surface.
- While negotiating turns, reduce speed and turn the hand steering wheel in a smooth, sweeping motion. Except when maneuvering at a very low speed, the hand steering wheel must be turned at a moderate, even rate.

6.6 Fueling

- Fuel tanks may not be filled while the engine is running. Avoid spillage.
- Spillage of oil or fuel must be carefully washed away or completely evaporated and the fuel tank cap replaced before restarting engine.
- No truck can be operated with a leak in the fuel system.
- Open flames are not to be used when checking electrolyte levels in storage batteries, or gasoline levels in fuel tanks.

6.7 Changing and Charging Storage Batteries

- Battery charging installations must be located in areas designated for that purpose.
- Facilities must be provided for: flushing and neutralizing spilled electrolyte, fire protection, protection of charging apparatus from damage by trucks, adequate ventilation for dispersal of fumes from gassing batteries.
- A conveyor, overhead hoist, or equivalent material handling equipment must be provided for handling batteries.
- Reinstalled batteries must be properly positioned and secured in the truck.
- A carbon filter or siphon must be provided for handling electrolyte.
- When charging batteries, acid must be poured into water. Not water into acid.
- Trucks must be properly positioned and brake applied before attempting to change or charge batteries.
- Care must be taken to assure that vent caps are functioning. The battery (or compartment) cover(s) must be open to dissipate heat.
- Smoking is prohibited in the charging area.
- Precautions must be taken to prevent open flames, sparks, or electric arcs in battery charging areas.

- Tools and other metallic objects must be kept away from the top of uncovered batteries.
- Avoid cell phone use.

6.8 Maintenance

- Any power-operated industrial truck not in safe operating condition must be removed from service. Authorized personnel must make all repairs.
- Those repairs to the fuel and ignition systems of industrial trucks that involve fire hazards must be conducted only in locations designated for such repairs.
- Trucks in need of repairs to the electrical system must have the battery disconnected before such repairs.
- Only use replacement parts that are currently recommended by the manufacturer.
- Industrial trucks must be examined before being placed in service, and must not be placed in service if the examination shows any condition adversely affecting the safety of the vehicle. Such examination must be made at least daily. Where industrial trucks are used on a round-the-clock basis, they must be examined before each shift. Any defects must be immediately reported and corrected.
- When the temperature of any part of any truck is found to be in excess of its normal operating temperature, thus creating a hazardous condition, the vehicle must be removed from service and not returned to service until the cause for such overheating has been eliminated.
- Industrial trucks must be kept in a clean condition, free of lint, excess oil, and grease. Noncombustible agents must be used for cleaning trucks. Low flash point (below 100 degrees F) solvents must not be used. High flash point (at or above 100 degrees F) solvents may be used.
- All operators shall carry a certification card or card sticker which indicates they are qualified operators of Powered Industrial Trucks. The certification card and or a card sticker shall be renewed or reissued annually. Powered Industrial Trucks shall be sufficiently controlled to prevent the use of the Powered Industrial Truck by unauthorized persons.

7.0 Responsibilities

7.1 Departments Assigned Powered Industrial Trucks

- Must implement and administer the Powered Industrial Truck program.
- Review the Powered Industrial Truck program annually for compliance and effectiveness.
- Verify that all employees who operate or work near powered industrial trucks are properly trained.
- Maintain written records of operator training on each model of a Powered Industrial Truck and the name of the trainer.
- Maintain written records of the frequent and annual inspections performed by the Powered Industrial Truck owner, including the date any problems found, the date when fixed, and the name of the person performing the repairs.
- Maintain written records of the name and purchaser of each Powered Industrial Truck.
- Make recommendations for revisions if necessary.

7.2 Supervisors:

- Coordinate employee training, and certify that all operators receive annual training including, but not limited to, the items listed in Section 8.0 of this document.
- Ensure that only trained and qualified individuals use powered industrial trucks.
- Verify employee compliance with the principles and practices outlined in the Forklift Safety Program.
- Provide specific operational training for each powered industrial truck in their department.
- Observe the operation of powered industrial trucks in your department, and correct unsafe practices.

7.3 Operators:

- Complete the Forklift Safety Program.
- Complete the Daily Pre-Use Inspection Checklist before operating any powered industrial truck.
- At least annually review the procedures outlined in Section 6.0 of this document.
- Observe the operation of powered industrial trucks in your department, and report unsafe practices to your supervisor.

7.4 Risk Management and Safety Training Coordinator

- Annually review and update the Forklift Safety Program as necessary.
- Provide orientation and initial training as requested by university departments and/or contractors.
- Provide the general safety training requirements for program.
- Monitor the effectiveness of program by receipt of copies of inspection checklists.
- Upon request, evaluate work areas & employee work practices.
- Observe the operation of powered industrial trucks, and report unsafe practices to the appropriate supervisor.

8.0 Training Requirements

Employees who are authorized to operate powered industrial trucks must receive training prior to engaging in their duties, and at least annually thereafter. The training is to ensure that the Forklift Safety Program is understood. The supervisor will also ensure that authorized powered industrial truck operators have acquired the necessary practical skills required for safe operation. Training is offered by Risk Management & Safety, and authorized department trainers.

Department trainers will be selected by their department, and approved by Risk Management & Safety. Department trainers must be experienced operators who have the knowledge, training, and skills necessary to evaluate the competence of trainees. Operational training will consist of a combination of general safety instruction, practical/operational training (demonstrations performed by the trainer, and practical exercises performed by the trainee), and evaluation of the

operator's performance in the workplace. All operational training must be conducted under close supervision.

8.1 Initial Training

- Receive instruction on the intended purpose and function of each control.
- Prior to operating any Powered Industrial Truck the trainee will read and understand the manufacturer's operating instruction(s) and user's safety rules, or receive training by a qualified person on the contents of the manufacturer's operating instruction(s) and users safety rules.
- Be informed of the Powered Industrial Truck operating limitations and restrictions as defined by the manufacturer.
- Understand by reading or having a qualified person explain all decals, warnings, and instructions displayed on the Powered Industrial Truck.
- During operational training, trainees may operate a powered industrial truck only under the direct supervision of authorized trainers, and where such operation does not endanger the trainee or other employees.
- All training and evaluation must be completed before an operator is permitted to use a powered industrial truck without continual and close supervision.

8.2 Annual Training - must include at least the following:

- Review of the Pre-Use Inspection Checklist.
- Review of Section 6.0 – Procedures.
- Updated information on new equipment.
- Review of university written program.

8.3 Re-Training - must be provided when:

- The operator has been observed operating the vehicle in an unsafe manner.
- The operator has been involved in an accident or near-miss incident.
- The powered industrial truck operators appear unfamiliar with their equipment, procedures, or appear to have inadequate knowledge concerning what is required by this program.
- The operator has received an evaluation that reveals that the operator is not operating the truck safely.
- A condition in the workplace changes in a manner that could affect safe operation of the truck.
- There is a change in job assignments, change in equipment or process, or whenever there is a change in the Forklift Safety Program.
- **Re-training will take place prior to continued equipment operation if the supervisor observes safety violations.**

8.4 Training Records.

- Each department must maintain a record of all individual training, including:
 - Subject of training.
 - Date of training.
 - Name of individual trained.
 - Name of supervisor or Risk Management & Safety person providing the training.
 - Training records must maintained by the department for a minimum of 3 years.

9.0 Monitoring

9.1 Departments Assigned Powered Industrial Trucks(s)

- Review documents prepared by individual supervisors. Documents may include, but not be limited to:
 - Employee evaluations
 - Annual visual operating observations
 - Daily Pre-Use Inspection forms including the resolution of any deficiencies noted by the operators.

9.2 Supervisors

- Review documents prepared by operators to ensure accuracy and consistency.
- Review all requests for repairs, and document completed repairs.
- Ensure that all operators receive annual training including, but not limited to the items listed in Section 8.2 of this document.
- Ensure that a Powered Industrial Truck does not remain in use if safety concerns are noted on the Daily Pre-Use Inspection form.
- Visually observe each Powered Industrial Truck operator at least annually to assess their driving competence and compliance with this program. Supervisors will place the following information in each operators file to document their observations: operators name, date, time, location, and supervisors comments relative to the performance observed.

9.3 Risk Management and Safety

- Review all records received, and evaluate them completeness and accuracy.
- Monitor the submission of required records and reports.
- Maintain a permanent record of all documents received.
- Provide additional training as may be necessary to ensure compliance with the Powered Industrial Truck program.
- Review and respond to all comments and suggestions received from departments, supervisors, or operators pertaining to the Powered Industrial Truck program.

10.0 Appendices

Appendix A

Daily Pre-Use Inspection Checklist Item	Pass	Fail	Corrective Action
1) Inspect the mast for broken or cracked weld points and any other obvious damage.			
2) Ensure roller tracks are greased and that chains are free to travel.			
3) Forks must be equally spaced and free from cracks along the blade and at the heels.			
4) Check hydraulic fluid levels.			
5) Check each hydraulic line and fitting for excessive wear or crimping.			
6) Check lift and tilt cylinders for damage or leaking fluid.			
7) Inspect mounting hardware on the cylinders.			
8) Check tires for excessive wear, splitting or missing tire material.			
9) Check pneumatic tires for proper pressure indicated on the tires.			
10) When applicable, inspect batteries for: Note: thick nitrile gloves, splash goggles, and long sleeves must be worn when working with batteries.			
a. Cracks or holes.			
b. Securely sealed cells.			
c. Frayed cables.			
d. Broken insulation.			
e. Tight connections			
f. Clogged vent caps.			
11) When applicable check propane power supplies for:			
a. Tanks having cracks, broken weld points, and other damage.			
b. All valves, nozzles, and hoses secured and not leaking.			