Clemson University

Powered Industrial Vehicle Safety Program

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Appendix A: Pre-Use Powered Industrial Vehicle Inspection & Maintenance Record

**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 vehicles, better known as forklifts and pallet jacks 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. Individuals authorized to use 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 by the safety department to document all training. Specific responsibilities for monitoring the effectiveness of this program are assigned to departments, supervisors, operators, and Safety. This document, will be reviewed annually by Safety, and those departments affected by its requirements. The annual review will assess the current level of program compliance, the program’s effectiveness in reducing injuries and property damage, and address program improvements.

**2.0 Policy**

Departments having powered industrial vehicles must ensure that supervisors and operators comply with all aspects of this safety program. All authorized university employees must successfully complete this training program prior to the operation of any powered industrial vehicle. Contractors operating powered industrial vehicles 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 vehicles as listed in Section 3.0 of this document.

**3.0 Requirements**

OSHA Standard 29CFR 1910.178 (Powered Industrial Vehicles)

ANSI/ISTDF B56.1 – 2009 (Safety Standard for Low Lift and High Lift Trucks)

**4.0 Purpose**

This program has been developed to reduce the risk of physical injury or property damage in areas where powered industrial vehicles 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 vehicles, forklifts, motorized hand trucks, and other specialized industrial trucks powered by electric motors or internal combustion engines by university employees and contractors, engaged in university operations or projects.

**6.0 Forklift Procedures**

6.1 Pre-Use Inspection

Prior to the operation of any powered industrial vehicle, 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 vehicle. 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. The vehicle must also be taken out of service until repaired.

6.2 Operation

Operators must wear seat belts at all times. Operators must sound the horn and use extreme caution when meeting pedestrians, making turns, and approaching blind spots. 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. Travel-ways must be maintained free from obstructions, aisles must be marked, and wide enough (six-foot minimum) for vehicle operation. Sufficient headroom must be maintained under overhead installations such as: lights, pipes, sprinkler systems, doors, etc. An overhead guard must be used as protection against falling objects. Lift capacity must be marked on all powered industrial trucks. Operators must assure the load does not exceed rated weight limits. When a powered industrial truck is left unattended (more than 25ft. away or out of sight), the 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 modifications must be approved by the manufacturer, and new rated load capacities determined and posted on the truck. Written approval is required by the manufacturer. Operators must report all incidents, 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. The forks 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. Tilting forward with forks 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, use only enough backward tilt to stabilize the load.

6.4 Traveling

The driver must slow down and sound the horn at cross aisles and other locations where vision is obstructed. When the load being carried obstructs the 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. 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. While negotiating turns, reduce speed and turn the hand steering wheel in a smooth, sweeping motion.

6.5 Fueling

Fuel tanks may not be filled while the engine is running. Avoid spillage. Spillage of oil or fuel must be absorbed using oil dry or vermiculite, the affected area carefully washed, and the fuel tank cap replaced before restarting engine. The spill clean-up debris must be containerized and placed in the oil storage area for proper disposal. 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.

6.6 Changing and Charging Batteries

Battery charging installations must be located in areas free of flammable materials. Equipment must be provided for flushing and neutralizing spilled electrolyte, fire protection, protection of charging apparatus from damage by trucks, adequate ventilation for dispersal of hydrogen gas discharged by charging the batteries. Precautions must be taken to prevent open flames, sparks, or electric arcs in battery charging areas. Employees charging and changing batteries shall be authorized to do the work, trained in the proper handling, and required to wear protective clothing, including face shields, long sleeves, rubber boots, aprons, and gloves.

6.7 Maintenance

Any power-operated industrial truck not in safe operating condition must be removed from service. Authorized personnel must make all repairs. 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.

**7.0 Responsibilities**

7.1 Departments Utilizing Powered Industrial Vehicle

Departments must implement and administer this Powered Industrial Vehicle program. Annual review of the Powered Industrial Vehicle program should be completed. Verify that all employees who operate or work near powered industrial vehicles are properly trained. The safety department will maintain records of operator training and records of the frequent and annual inspections performed by the Powered Industrial Vehicle operator. Records can be viewed on the campus shared drive. When problems are found, the company performing the repairs will provide documentation of those repairs.

7.2 Supervisors

* Coordinate employee training, and certify that all operators receive 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 vehicles.
* Provide specific operational training for each powered industrial vehicle in their department.
* Observe the operation of powered industrial vehicles in your department, and correct unsafe practices.

7.3 Operators

* Complete the Powered Industrial Vehicle safety training module.
* 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 vehicles in your department, and report unsafe practices to your supervisor.

7.4 Safety Manager

* Annually review and update the Powered Industrial Vehicle Program as necessary.
* Provide orientation and initial training as requested by university departments.
* Provide the general safety training requirements for program.
* Monitor the effectiveness of program by receipt of copies of inspection checklists.
* Evaluate designated areas for forklift use.
* Observe the operation of powered industrial vehicles, and report unsafe practices to the appropriate supervisor.

8.0 Training Requirements

Employees who are authorized to operate powered industrial vehicles must receive training prior to engaging in their duties, and at least every three (3) years thereafter. The supervisor will ensure that authorized powered industrial vehicle operators have acquired the necessary practical skills required for safe operation. Training is offered by the safety manager, and authorized department trainers. Department trainers will be selected by their department, and approved by the safety manager. 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 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 Vehicle, 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 Vehicle 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 vehicle 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 vehicle.

8.2 Training Records

Training records will be maintained by the safety department for a minimum of 5 years. The documents will include:

* Date of training.
* Name of individual trained.
* Name of supervisor or safety person providing the training.

9.0 Program Evaluation

The powered industrial vehicle program shall be evaluated on a periodic basis utilizing the protocols set forth by the safety steering committee. The evaluation committee will consist of a department representative and a designee from the safety department. The deficiencies determined in the report will be documented and corrective action plans will be determined for corrective action.

APPENDIX A

