



ISRI[™]

SAFETY GUIDANCE MATERIAL

SAFETY OPERATIONS GUIDANCE

This safety resource was written for the scrap industry by the scrap industry and was developed to assist you in making your scrap operation a safe place for employees, customers, and visitors. This resource covers OSHA requirements that may or may not be applicable to your operation.

POWERED INDUSTRIAL TRUCKS

DEFINITION: A wheeled-type motorized truck designed primarily as a fork truck with a vertical mast and/or pivoted boom, variable reach or of fixed length, which may be equipped with attachments for lifting pallets, drums, or other materials.

Potential Hazards:

- Dust
- Exhaust fumes
- Slips/Trips/Falls
- Falling materials
- Rollover
- Fuel vapors
- Noise
- Oil, motor, hydraulic and other fluids
- Pinch points
- Battery electrolyte

Guarding/Shielding:

- Power transmission parts such as gears, shafts, belts, pulleys, masts, booms and the like must be adequately guarded to prevent accidental contact by workers.
- Forklift trucks used to charge a furnace must be outfitted with splash and impact resistant screens, mesh or safety glass to protect operator. A solid roof must be used in these applications.
- Operators must use seatbelt on vehicles so equipped.
- Overhead 'cage' protection must be included in forklifts lifting materials at overhead heights.

Protective Equipment:

Hard hats*

Safety glasses*

Steel toe/steel shank work boots*

Gloves as needed

Respirator as needed

**minimum requirements*



Safety Procedures:

- Powered industrial trucks must only be operated by properly training and authorized employees
- Daily pre-shift use inspections must be performed using the applicable inspection checklist. Checklist must be filed and maintained for one year.
- No person may be allowed to ride as a passenger on a forklift truck unless it is equipped for this purpose.
- Powered industrial trucks must not be used in atmospheres containing hazardous concentrations of combustible metal dusts, particularly aluminum, magnesium, and their commercial alloys, and anywhere that volatile flammable liquids or flammable gases are handled, processed or used.
- Only electrically powered industrial trucks can be used in atmospheres where airborne combustible dusts are in suspension at dangerous concentrations.
- Railroad cars and highway trucks/trailers must be braked and chocked with suitable dockboards or bridgeboards in use before crossing or entering with powered industrial trucks.
- When a powered industrial truck is left unattended by the operator the load must be lowered, controls neutralized, power shut off, and brakes set. Wheels must be blocked/chocked if the powered industrial truck is on an incline. A powered industrial truck is considered unattended when the operator is 25 feet or more away and remaining in view or when the vehicle is out of the operators view.
- When dismounting a powered industrial truck the operator must lower the load, engage brakes, and controls neutralized.
- Operators of industrial trucks must be required to slow down and sound horn when crossing aisleways or other locations where vision is obstructed.
- Railroad tracks must be crossed diagonally whenever possible and powered industrial trucks cannot be parked closer than 8 feet from enter line of tracks or within the 'fouling' area.
- When ascending or descending grades in excess of 10 percent loaded industrial trucks must keep the load on the upgrade side. On all grades load must be raised and tilted back to avoid contact with the surface.
- If the load being carried obstructs forward view, the powered industrial tuck must be operated with the load trailing.
- Areas designated for battery charging or removal must have facilities for emergency eye wash, neutralizing spilled liquids, fire protection and protection of equipment from trucks and other traffic. Area must be adequately ventilated.
- Written procedures for battery charging must be posted and include:
 - Powered industrial truck properly positioned in designated area before charging;
 - Acids poured into water, not water into acids;
 - Battery compartments/covers must be open to dissipate heat and vent caps must be functioning;
 - Smoking is prohibited in and near the charging area;
 - Precautions must be taken to prevent open flames, sparks, electric arcs or other sources of ignition in the charging area;
 - Tools and other metallic objects must be kept away from the uncovered batteries;

- Operator training program:
 - Employers must assure that operators are properly trained to operate the equipment safely.
 - Employees must not operate equipment until having been trained and evaluated by employer.
 - Trainees may operate the equipment only under the direct supervision of an individual with knowledge of and experience with the equipment, where such operation does not endanger other employees.
 - Required training includes: formal instruction; practical training; evaluation of operators performance.
 - The training must be provided by persons with knowledge, training, and experience to train powered industrial truck operators and evaluate their competence. The trainer need not be a supervisor. The trainer is not required to have completed a formal training program or certification specifically addressing powered industrial truck operation. The employer must be satisfied that the trainer is qualified to provide the training and evaluation.

- Training program required content:
 - Operating instructions, warnings and precautions for the types of industrial trucks the operator will be authorized to use;
 - Differences between powered industrial trucks and automobiles;
 - Truck controls and instrumentation, where they are located. What they do and how they work;
 - Engine and motor operation;
 - Steering and maneuvering;
 - Visibility including loading restrictions;
 - Fork and attachment adaptation, use, operation and limitations;
 - Vehicle capacity;
 - Vehicle stability;
 - Vehicle inspection and maintenance requirements;
 - Refueling and/or charging procedures, requirements, and precautions;
 - Operating limitations;
 - Any other operating instructions, warnings or precautions listed in the operators manual for the types of vehicles used and requiring training.

- Workplace-related topics:
 - Surface conditions and changing surface conditions of the surfaces which the vehicle may be operated on;
 - Composition of loads to be carried and load stability;
 - Load manipulation, stacking and unstacking;
 - Pedestrian traffic in areas where the vehicle will be operated;
 - Narrow aisles and other restricted places where the vehicle will be operated;
 - Ramps and other sloped surfaces that could affect the vehicles stability;
 - Closed environments and other areas where insufficient ventilation or poor vehicle maintenance could cause a buildup of carbon monoxide or diesel exhaust;
 - Other unique or potentially hazardous environmental conditions in the workplace that could affect safe operations.

Training on all of the topics above is not required if the operator has already received training on them if such training is appropriate to the truck and working conditions and if the employee has been evaluated and found competent to operate the truck safely. Avoidance of duplicative training applies to both newly hired and current employees.

- Certification
 - The employer must 'certify' that each operator has been properly trained and evaluated. The written certification must include the name of operator, the date of training, the date of the evaluation, and the identity of the person(s) performing the training and evaluation. Signatures are not required on the certificate.

The employer is not required to maintain training materials, course outlines, and other information when outside trainers are used.

- Refresher Training and Evaluation
 - The operator of a powered industrial truck must undergo refresher training including evaluation of the effectiveness of that training 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 operator's evaluation reveals the truck is not being operated safely;
 - A condition in the workplace changes in a manner that could affect safe operation of the truck.
 - A formal evaluation of the operator's performance must be conducted every three years.
- A written preventative maintenance program must be in place including documentation and retention of findings, maintenance completed, and corrections.
- Program must include checks for abrasions, bends, dents, cracks and wear on forks.
- Written daily inspection program including checklist.
- Motorized hand trucks should enter confined areas with the load end facing forward.
- Industrial trucks should be started only when the operator is seated at the controls.
- The engine must be stopped and the operator off the truck during refueling.
- Powered industrial trucks carrying a load should not be driven over thick ice, mud, or other unstable surfaces. Tires can sink causing load to shift and/or fall, or truck to rollover.

Powered Industrial Truck Inspection Checklist

Battery-Powered Lift Trucks

Inspected by: _____ Date: _____	Yes	No	N/A
Battery plug connection			
Battery charge			
Battery load test			
Brakes – service and seat brakes			
Lights – head, tail and warning			
Horn			
Hour meter			
Steering			
Tires			
Hydraulic controls			
Other conditions or devices attached			
Backup alarm			
Forks, Backrest, Carriage			
Overhead guard/rollover protection			
Mast, chain			
Explain any action taken if applicable:			

Inspection required before every shift.

Operator’s Signature and Date _____



Powered Industrial Truck Inspection Checklist

Engine-Powered Lift Trucks

Inspected by: _____ Date: _____	Yes	No	N/A
Fuel level			
Oil level and pressure			
Water level and fan belt			
Brakes – Service and Parking			
Lights – head, tail and warning			
Horn			
Hour meter and guages			
Steering			
Tires			
Hydraulic Controls			
Other conditions or attachments			
Mast and Chain			
Overhead Guard/Rollover protection			
Backup alarm			
Forks, Backrest, Carriage			
Explain any action taken if applicable:			

Inspection required before each shift.

Operator’s signature and date: _____

