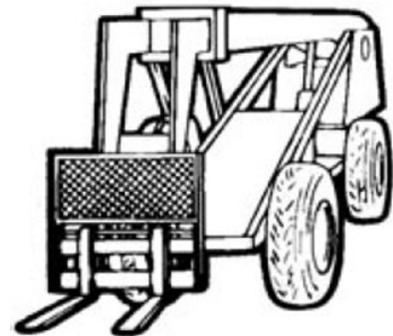


Safety Manual
for
Powered Industrial Truck Operators
and
Rough Terrain Truck Operators



Consultation Education and Training (CET) Division
Michigan Occupational Safety and Health Administration (MIOSHA)
Department of Labor and Economic Opportunity (LEO)
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Contents:

Foreword.....	1
Powered Industrial Trucks	2
Permits	2
Personal Protective Equipment.....	2
Safe Operations.....	3
Know the Rules of the Road.....	4
Checkout Procedures	5
Unsafe to Drive.....	5
Refueling.....	6
Unattended Trucks.....	6
Elevator Safety.....	6
Special Racks Best Practices	7
Loading/Unloading	7
Highway Trucks.....	7
Railway Cars.....	7
Slow Moving Vehicles	8
If an Accident Happens.....	8
Protect Your Health	9
General Safety and Health Guidance.....	9
In Review	10

Foreword

An industrial truck operator's job is very important. It is a position of responsibility, the same as when you are driving your car on the road. There are rules and responsibilities you must obey and accept.

A “powered industrial truck” means a mobile, power driven vehicle used to carry, push, pull, lift, stack, or tier material.

For specific rules and regulations regarding your responsibilities when driving a powered industrial truck in Michigan, see MIOSHA General Industry Safety Standard Part 21- Powered Industrial Trucks, Construction Safety Standard Part 12 - Scaffolds and Scaffold Platforms, Construction Safety Standard Part 13 - Mobile Equipment.

It is important that you read and understand this manual. Periodic review is suggested to maintain your operating proficiency.

Powered Industrial Trucks

PERMITS

You must be trained and tested before you can operate a powered industrial truck. Upon passing the test, and meeting other operator requirements, a permit will be issued to you. It should be carried by the operator or be available upon request.

PERSONAL PROTECTIVE EQUIPMENT

When employers conduct a personal protective equipment hazard assessment (as required in Part 33, Personal Protective Equipment), they should include powered industrial trucks in their assessment.

Safety shoes and/or work shoes are **strongly recommended**.

Approved eye protection shall be worn when exposed to eye or face hazards that are identified in R3312. Head protection shall be worn where high-stacking operations are involved.

Additional personal protective equipment may be required in a battery charging/charging operation:

- Chemical splash goggles and face shield
- Gloves
- Apron
- Foot protection
- Hard hats
- Eye wash facilities

Only trained and authorized employee(s) must change or charge a battery. This should be done only in a designated battery charging area.

No smoking or sources of ignition near battery or in battery charging area.



When operating a powered industrial truck in a hazardous area, only a truck specifically equipped for such operation shall be used.

SAFE OPERATIONS

No eating, drinking, or smoking while driving.

Always maintain control of vehicle.

No horseplay or stunt driving.

You must give right-of-way to emergency vehicles.

Keep a clear view of the direction of travel. If the load blocks your view, drive with the load trailing.

Operate in designated powered industrial truck routes. Keep aisles clear.

Operator shall give the right of way to ambulances, fire trucks and other emergency vehicles and shall always also safeguard other employees. Courteously sound horn or other type of audible device as a warning.

Do not approach persons standing in front of fixed objects.

You should never allow any person to stand or pass under an elevated portion whether loaded or not.

Do not overload truck.

No rider unless the powered industrial truck is designed with a passenger seat.

Use the brakes and come to a complete stop:

- at blind corners
- at workplace entrances used by other traffic
- before reversing direction of travel
- at designated stop signs
- before entering main aisles or roadways

Always travel at the slowest speed on ramps.

No arms or legs between uprights of mast or outside the running lines of powered industrial truck.

Never use your powered industrial truck for bulldozing, opening doors, pushing objects, or towing vehicles. Do not use tips of forks to push or rearrange stock. Use your truck for its intended purpose.

It is a violation of Federal law for anyone UNDER 18 years of age to operate a forklift or for anyone OVER 18 years of age who is not properly trained and permitted to do so.

KNOW THE RULES OF THE ROAD

Keep three truck lengths behind the truck you are following.

Obey all traffic signs.

Never pass another vehicle traveling in the same direction at intersections, blind spots, or other dangerous areas.

Place forks under the load as far as possible when loading. Tilt the mast back to cradle the load.

You must always maintain control over the vehicle. Allow for safe emergency stops. Start, stop, and turn in a way which will prevent a load from shifting or overturning the truck

Keep the forks in the lowest position from the floor when vehicle is moving.

Remove loose objects from floors. Do not drive over or around them.

Tilt elevated load forward only when directly over unloading area, with load as low as possible. Use special care when placing loads near heaters, electrical connections, pipes, etc.

Be careful of the rear end of the truck swinging around when turning.

Park powered industrial truck in authorized areas only.

Always observe the floor load limits and overhead clearance.

An overhead guard on a powered industrial truck is required if you are stacking materials above your head.

Look around before moving. Start, turn, and brake smoothly. Lift load carefully and smoothly.

CHECKOUT PROCEDURES

Perform daily checks of your powered industrial truck at the start of each shift. It is recommended that a written record of vehicle repair be kept.

What to check for and report:

Each shift, prior to starting your powered industrial truck, check the following:

- | | | | |
|---------------------------------|-------------------------------------|--|--|
| <input type="checkbox"/> Brakes | <input type="checkbox"/> Steering | <input type="checkbox"/> Oil level | <input type="checkbox"/> Water level |
| <input type="checkbox"/> Tires | <input type="checkbox"/> Hydraulics | <input type="checkbox"/> Fuel level/battery charge | <input type="checkbox"/> Instrument controls |

Then after starting your truck check:

- | | |
|---|--|
| <input type="checkbox"/> Warning lights | <input type="checkbox"/> Brakes – both service and parking |
| <input type="checkbox"/> Gauges | <input type="checkbox"/> Hydraulic control operations |
| <input type="checkbox"/> Horn | <input type="checkbox"/> Lift and tilt operations |
| <input type="checkbox"/> Headlights for night driving | <input type="checkbox"/> Load engaging means |

UNSAFE TO DRIVE

Your truck is unsafe to drive if:

- Service/parking brakes do not perform
- Fuel system leaks
- Excessive lift, drift, or tilt of cylinders or forks
- Excessive free play in steering
- Excessive hydraulic leaks

If mechanical failure occurs on the job, contact your supervisor. He/she will decide if the truck should be driven to repair or towed.

Maintenance, repair, adjustment, and inspection are to be performed by authorized personnel only.

REFUELING

- Smoking or any other source of ignition (within 25 feet) when refueling, is prohibited.
- Replace fuel cap before restarting.
- In case of a fuel leak in gasoline or diesel trucks, stop *immediately*, shut off ignition, and contact supervisor/plant security.
- All repairs shall be made by authorized personnel.

UNATTENDED TRUCKS

Before leaving the truck:

- Stop truck
- Fully lower the load-engaging means
- Place directional controls in neutral
- Apply the parking brake
- Stop the engine or turn off power
- Turn off the control or ignition circuit

If the truck must be left on an incline, block the wheels.

ELEVATOR SAFETY

- An operator shall drive onto elevators only when authorized to do so.
- An elevator shall be entered slowly, and then squarely after the elevator car is properly leveled to the floor. Once on the elevator, an operator shall neutralize the controls, set the brakes, and shut off the power.
- Motorized hand trucks shall enter an elevator and other confined areas with the load end leading.
- A truck shall not enter an elevator if the combined weight of the load and truck exceeds the capacity of the elevator.

SPECIAL RACKS BEST PRACTICES

Carry all parts and materials in approved containers only.

Carry barrels and drums in special racks.

Carry oxygen, acetylene, and other gas cylinders – upright-fastened-safety caps tight and in approved racks.

LOADING/UNLOADING

HIGHWAY TRUCKS –

Before entering trucks and trailers, check the condition of flooring for weaknesses/breaks.

A highway truck and trailer shall not be boarded by a powered industrial truck before the highway truck and trailer has its brakes set and not less than two wheels blocked or must be restrained by other mechanical means installed in a manner that will hold the trailer from movement.

Visually inspect landing gear of semitrailers before the trailer is uncoupled from the tractor to assure ability of the landing gear to support the imposed load.

RAILWAY CARS –

Check flooring for breaks/weaknesses. Be sure wheel stops, hand brakes, and other positive protection is in place to prevent motion of railcar during loading and unloading.

Portable runways and plates between docks and trucks or railroad cars should be checked for capacity and be properly secured before crossing.

Only authorized or trained personnel should open and enter a rail car.

Cross tracks diagonally, and never park closer than eight and a half feet from center of a railroad track.

Never open or close freight car doors with your truck unless it is designed and/or specially equipped to do so.

Never tow or push railcars or other vehicles unless your truck is designed for that purpose.

SLOW MOVING VEHICLES

JUST A REMINDER WHEN OPERATING ON PUBLIC ROADS

Operate your powered industrial truck in accordance with local traffic rules when on a public road.

Part 37 Accident Prevention Signs and Tags

Emblem for slow-moving vehicles:



- (1) An emblem shall be used on the rear of a vehicle used on a public road which, by design, moves at 25 miles per hour or less outside a building. Such an emblem shall not be used as a clearance marker for wide machinery or as a replacement for required lighting.
- (2) This emblem shall consist of a fluorescent yellow-orange triangle with a dark red reflective border. It shall be entirely visible in daylight and at night from all distances between 600 and 100 feet from the rear when directly in front of the lawful upper beam of the headlamps.
- (3) The emblem shall be mounted, point up, in a plane perpendicular to the direction of travel, plus or minus 10 degrees. It shall be placed centrally at the rear of the vehicle, unobscured, and two to six feet above the ground measured from the lower edge of the emblem. It shall be securely attached to the vehicle.

IF AN ACCIDENT HAPPENS

Report all accidents and near misses: including personal injury, damage to machine, building, or equipment. If an operator has been observed to operate the vehicle in an unsafe manner or if the operator has been involved in an accident or near-miss incident, refresher training in relevant topics shall be provided.

PROTECT YOUR HEALTH

Early Symptoms of PIT Carbon Monoxide Exposure

- Headache
- Dizziness
- Weakness
- Nausea
- Visual Disturbance
- Confusion

Symptoms may not develop until the Carbon Monoxide concentration exceeds the permissible exposure limits

PIT Engineering Controls - Combustion-Powered

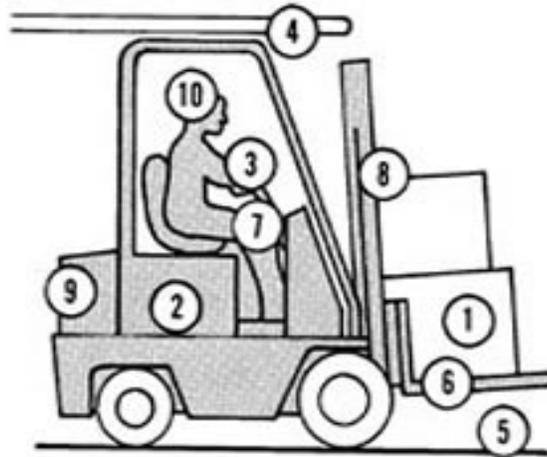
- Elimination: electric lift trucks
- Substitution: propane for gas or diesel
- Ventilation: general dilution
- Other controls:
 - oxygen sensor
 - catalytic converter
 - engine maintenance

GENERAL SAFETY AND HEALTH GUIDANCE

Any supervisor or manager has the authority to stop any person driving without authorization or in an unsafe manner.

This booklet is presented to you as part of your powered industrial truck training program. Keep it close at hand and review it periodically. It will help you become a skilled, safe, operator.

IN REVIEW



1. Know load limits
2. Conduct daily maintenance checks
3. Sound a warning
4. Be aware of clearance heights
5. Know surface conditions
6. Forks close to floor
7. Arms and legs within running lines of truck
8. Forks tilted back when loaded
9. Only authorized personnel to charge or change battery
10. THINK AND ACT SAFELY

Copies of Part 21. Powered Industrial Truck Safety Standard are available from the **MIOSHA Standards Section at (517) 284-7740**, or at the agency's website: www.michigan.gov/mioshastandards.

For your convenience, we now have a printer-friendly template of the sample operator permit (CET# 0116C) on our website: www.michigan.gov/mioshapublications.



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