

# **POWERED INDUSTRIAL TRUCK SAFETY**



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## PURPOSE

To ensure that all safety requirements for both the mechanical operation of Powered Industrial Trucks (Forklifts) and the employee training and material handling requirements are maintained and conveyed to all applicable employees.

Continental Steel and Conveyor Co. and Continental Rental, Inc. will ensure that:

- Only properly trained and authorized employees are permitted to operate a forklift. Instruction must be conducted by a trained, knowledgeable, and experienced instructor.
- Refresher training will occur any time an operator demonstrates a lack of understanding of proper forklift operation, in the event of an accident or near miss, when unsafe operation is observed, anytime a new type of lift truck is brought in to use and at least every three years after initial training.
- Forklifts are maintained in proper operating condition.
- A safety checklist is maintained for each lift.
- The safety check are performed each shift prior to operating the lift. These checklists should be kept for two months.

## General Operating Rules

1. Only authorized personnel may operate a forklift.
2. Inspect forklift daily.
3. Always maintain a safety distance from the truck ahead of you (at least three truck lengths)
4. Stunt driving and horseplay is not allowed.
5. Never allow your arms or legs between the uprights of the mast or outside the running lines of the truck.
6. Always avoid running over loose objects.
7. Do not allow anyone to ride on the sides, rear, or forks of the vehicle.
  - a. If it is necessary to have someone on the forks, make sure they are in a safety platform with proper fall protection in use.
8. Drive at a normal walking speed.
9. When traveling on the truck, the forks must be tilted back and raised a maximum of 5” to

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- clear the floor surface.
10. Forklifts are engineered to be operated slowly, not by speeding.
  11. Always keep your truck under control.
  12. Always operate your truck at a speed that will permit it to be brought to a stop in a safe manner.
  13. Always slow down on wet or slippery surfaces.
  14. Always reduce your speed to a safety level while making turns.
  15. Always ascend and descend grades very slowly. When grades are in excess of 10% always drive with the forks/load in the upgrade position.
  16. Never pass other trucks traveling in the same direction.
  17. Always slow down and sound your horn at cross aisles and other locations where vision is obstructed.
  18. Always come to a complete stop when approaching a doorway and sound the horn before proceeding through.
  19. Always travel backwards when your load obstructs your forward view.
  20. Always look in the direction you are traveling and keep a clear view of your path of travel.
  21. Always be certain there is sufficient headroom under overhead installations, lights, pipes, etc.
  22. Do not drive up to someone standing by a wall, a bench, or any other obstacle.
  23. Be aware of pedestrians.
  24. Always use an overhead guard as protection against falling objects.
  25. Always take unsafe trucks out of service.
  26. When parking, be sure to bring forks to the floor, turn off motor, remove key from ignition, and put on the parking brake.
  27. Do not block emergency fire equipment or exit doors.
  28. Notify supervisors of *all* accidents when they occur.

## **ON DOCKS AND PLATFORMS**

1. Always be certain that brakes are set and wheel chocks are in place to prevent movement of trucks and trailers while loading and unloading.
2. Always be sure dock boards and bridge plates are properly secured before driving over them.
3. Always drive over them slowly and carefully and never exceed their rated capacity.
4. Always check the flooring of trucks and trailers for weaknesses before driving onto them.
5. Always maintain a safe distance from the edge of ramps and platforms while on any elevated dock or platform.

## **WHEN LOADING TRUCKS**

1. Always handle only stable or safely arranged loads. Use caution handling off-center loads that cannot be centered.
2. Never lift any loose skid without first securing the load.
3. Always handle drums on a pallet or using an approved drum-handling device.
4. Never handle loads in excess of the rated capacity of the truck (the capacity must be on the tag and/or the mast of the fork truck).
5. Always place the forks under the load as far as possible then tilt the mast back carefully to stabilize the load.
6. Always use extreme care then tilting the load forward or backward, particularly when high tiering. Never tilt forward with forks elevated except to pick up a load. Never tilt an elevated load forward except when the load is in the deposit position over a rack.
7. When stacking or tiering, use only enough backward tilt to stabilize the load.

## **FIRE AND EXPLOSION CONCERNS**

1. Never fill the fuel tank while the engine is running.
2. Never operate a truck with a leak in the fuel system.
3. Never use an open flame to check the electrolyte level in storage batteries or the gasoline level in tanks.

4. Always allow spilled oil or fuel to evaporate thoroughly or wash it off before restarting the engine.
5. Always recap the tank before starting the engine.
6. *Do not smoke* when driving, refueling, or doing any battery charges.
7. Always wear safety glasses and gloves when connecting electric lifts to the charging station.

## **FORKLIFT SAFETY**

1. You shall always follow manufactures guidelines & operation rules, and company safety rules.
2. Engineering Principles are based on OSHA regulations and accepted industry guidelines.
3. Lever Principle
  - a. The lever principle is based on counterweight load operations, where two objects are balanced on a fulcrum. The weight can be shifted by moving the fulcrum closer to or farther away from the load.
  - b. The counterweight load is balanced on the fulcrum.
  - c. The fulcrum is composed of the front two tires.
5. Load & Lift Capacity
  - a. The load capacity is based on the load center of what you are carrying. As the load center *increases*, the load capacity *decreases*.
  - b. The load center is found by measuring from the center of the load to the vertical face of the forks. For example: The standard size of a pallet is 48X48. 48 divided by 2 is 24. Therefore, an evenly centered load on an average sized pallet is 24-load center.
  - c. Load capacities and maximum height of the load is found on the data plate. The data plate tells you how high you can safely lift the load. For example: A 5000 lb. load at a 24" center can be safely lifted to the maximum height of the forklift if the load is kept vertical.
  - d. Generally, the data plate gives three lifting capacities. For example: 5000 lbs at a 24" load center, 4,000 lbs at a 36" load center, and 3,000 lbs at a 42" load center.
6. Center of Gravity
  - a. The center of gravity for a forklift is located towards the rear of the forklift. The higher you lift a load, the more the center shifts toward the forks. If you lift too heavy a load, or tilt a heavy load, you will shift the center of gravity too far, and tip the lift truck over.
  - b. There is also a *stability triangle* that helps to balance the forklift. The stability triangle is a three-part system composed of a pivot pin, and the two front wheels.
  - c. When you have a load on the forks, the center of gravity moves toward the forks, making a combined center of gravity. If this center of gravity shifts out of the imaginary lines of the triangle, the forklift will turn over.

### **Operator Maintenance Procedures**

1. Do not use unsafe equipment. An unsafe vehicle is defined as having any of the following conditions:
  - a. Horn defective
  - b. Brakes defective
  - c. Parking brake defective
  - d. Steering wheel has more than two inches of play
  - e. Leaks in fuel, oil hydraulic or transmission systems
2. Check fuel, oil, and radiator before operating.
3. When operating an electric forklift, make sure battery is checked on each shift.
4. Before charging batteries, make sure battery water level covers the top of battery plates, as this ensures a good charge and you will not ruin your battery.
5. When charging batteries:
  - a. Follow company safety rules
  - b. Always wear eye protection
  - c. Make sure ignition key and battery charger are turned off when plugging charger into forklift to prevent sparks from causing explosions
6. Once a day run the mast all the way to the top to lubricate pistons and rubber parts.
7. Periodically check the tension on the mast chains to ensure the tension on both chains is equal. It is unsafe to operate forklifts with mast chains of unequal tension.

### **PALLET JACK SAFETY**

1. Check equipment for defects before starting work. Make sure safeties, catches and brakes are in working order. Report all mechanical or hydraulic problems to your supervisor immediately – do not use a malfunctioning device.
2. Familiarize yourself with the manufacturer's special instructions for safety. Review and check out emergency stopping procedures and load lowering requirements.
3. Plan what you intend to accomplish in advance. Before you move a loaded lifting device that has casters or wheels for mobility, make sure the load is secure and the lifting mechanism is set at the lowest operating position. Only move loads over level and even surfaces.

4. Do not exceed the device's capacity of lifting loads, heights, and traveling limits. Block wheels and casters before lifting.
5. Check the attachment points of the tackle blocks and make sure they are strong enough to support the load.
6. Position the lift directly under the final position to which the equipment or materials are to be raised.
7. Check balance and load distribution to prevent the lift from tipping or overturning.
8. Make sure only properly instructed personnel operate the lifting device.
9. Never indulge in horseplay or practical jokes with lifting equipment.

## **AERIAL LIFT SAFETY**

### **Preparation**

1. Only employees who have been trained on the equipment will be permitted to work with, on, or near aerial or scissor lifts.
2. The equipment must be inspected at the beginning of the day and periodically throughout the day, paying special attention to braking and safety devices.
3. The lift platform will be kept clear of clutter and debris.
4. Employees must clean mud and grease off their shoes before entering the work platform.
5. Operators must read and understand the safety and operation notices on the equipment to insure equipment is operated within its safe capacity.

### **Operations**

1. Be aware of surroundings to avoid overhead or side obstructions. Post a spotter when moving equipment through tight quarters.
2. Exercise particular caution when backing up, and always use a spotter to assist in backing.
3. Make sure the floor or ground on which you intend to drive is strong enough to support the weight of the machine.
4. Follow manufacturer's recommendations regarding advisability of moving the lift with the platform elevated. Movement of the machine with the platform elevated is not recommended unless the surface over which it will travel has been observed by a ground-level spotter to be completely smooth, level, and free of any debris or obstruction.
5. Avoid electrical lines and overhead cables, pipes, joists, etc. when raising or lowering the lift.
6. Monitor movements and behavior of other people in the work area.

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7. The lift must be moved smoothly and deliberately, to avoid injury to workers in the bucket.
8. The area surrounding and beneath lift operations must be kept clear of personnel and equipment.

### **Employee Safety on the Lift**

1. Employees must exercise caution when entering or exiting the work platform.
2. Employees must not attempt to enter any part of the vehicle when it is in motion.
3. Make sure all entry gates are closed and all guardrails are up before the lift is raised.
4. Keep at least one foot on the platform at all times. Do not straddle the top rail or enclosure.
5. Use required restraint system or other personal protective equipment.
6. If you are using power tools while on the lift, make sure tools, and lift are properly grounded to prevent electrical shock.

### **CHERRY PICKER AND BOOM TRUCK SAFETY**

#### **Preparation**

1. Only employees who have been trained on the equipment will be permitted to work with, in, or near cherry picker/boom truck vehicles.
2. The equipment must be inspected at the beginning of the day and periodically throughout the day, paying special attention to braking and safety devices.
3. The cab and bucket will be kept clear of clutter and debris.
4. Employees must clean mud and grease off their shoes before operating the vehicle or entering the bucket.
5. Operators must read and understand safety and operations notices on the equipment to insure equipment is operated within its safe capacity.

#### **Operations**

1. Secure the turntable and/or lower the boom before traveling.
2. Be aware of surroundings to avoid overhead or side obstructions. Post a spotter when moving equipment through tight quarters.
3. Exercise particular caution when backing up, and always use a spotter to assist in backing.

4. Make sure the floor or ground on which you intend to drive is strong enough to support the weight of the machine.
5. Unless lifting within “on rubber” capacities, operate with outriggers fully extended so as to remove all weight from the machine’s tires.
6. Avoid electrical lines and overhead cables, pipes, joists, etc.
7. Monitor movements and behavior of other people in the work area.
8. The boom and bucket must be moved smoothly and deliberately, to avoid injury to workers in the bucket.
9. The area surrounding and beneath bucket operations must be kept clear of personnel and equipment.

**Employee Safety in the Bucket**

1. Employees must exercise caution when entering or exiting the cab or bucket.
2. Employees must not attempt to enter any part of the vehicle when it is in motion.
3. Make sure all entry gates are closed before the bucket is raised.
4. Keep at least one foot on the floor of the bucket at all times. Do not straddle the top rail or enclosure.
5. Use required restraint system or other personal protective equipment.
6. If you are using power tools while in the bucket, make sure tools and bucket are properly grounded to prevent electrical shock.
7. Take up only the workers, tools, and materials required to complete the immediate task.

*The keys to safety are a good attitude, to think about safety, and to not take short cuts.  
Take time for safety, because safety matters, and you matter!*