



POWERED INDUSTRIAL TRUCK (FORKLIFT) PROGRAM

FOR THE

CITY OF BURLINGTON



**ADOPTED BY THE
CITY OF BURLINGTON
CENTRAL SAFETY COMMITTEE
DATE: 01 / 10 / 06**

POWERED INDUSTRIAL TRUCK PROGRAM

OSHA 29 CFR 1910.178

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City of Burlington

POWERED INDUSTRIAL TRUCK PROGRAM

Regulatory References:

General Industry: 29 CFR 1910.178 (General Requirements)
29 CFR 1910.178A (Stability of Powered Industrial Trucks)

I. INTRODUCTION

The purpose of this safety program is to provide employees of the City of Burlington sufficient knowledge and training to prevent workplace injuries or property damages relating to the operation of powered industrial trucks and to ensure compliance with local, state and federal regulatory statutes and with written policies of the City of Burlington.

II. SCOPE

Employees of the City of Burlington may operate a powered industrial truck only if they have successfully completed a training course approved by the City's Safety Director.

A (documented) evaluation of each powered industrial truck operator's performance shall be conducted at least once every three years. [1910.178(l)(4)(iii)]

An initial evaluation must consist of a formal training course including a written test plus practical skills demonstration. Subsequent evaluations may include a practical skills demonstration conducted by a person who has the knowledge, training and experience to train operators and evaluate their competence in order to verify the employee's knowledge and skill levels and may exclude a written test at the discretion of the competent person.

Employees who have been trained during the previous 36 months by another employer may become certified to operate a powered industrial truck for the City of Burlington by successfully completing (documented) refresher training conducted by a person who has the knowledge, training and experience to train operators and evaluate their competence.

A certified powered industrial truck operator who demonstrates a lack of sufficient knowledge or skills, or who operates a powered industrial truck in an unsafe manner will be suspended from further operation of a powered industrial truck until he/she has successfully completed refresher training by a person who has the knowledge, training and experience to train operators and evaluate their competence. The content of refresher training will specifically address the discrepancies observed and is intended to return the truck operator to full and safe performance of his/her job as soon as is practical. Failure to successfully complete training or refresher training will result in immediate suspension of the operator's certification to operate a powered industrial truck in order to protect both the operator and his/her co-workers.

III. RESPONSIBILITIES

DEPARTMENT HEADS who assign tasks that require employees to operate powered industrial trucks shall ensure that all employees so assigned have successfully completed training that complies with this program prior to allowing those employees to operate a powered industrial truck.

SUPERVISORS of employees who operate powered industrial trucks shall ensure that powered industrial trucks driven by themselves or by employees who report to them are mechanically maintained at all times and

that employees for whom they are responsible operate their trucks in a safe manner that complies with local, state, federal and City of Burlington regulations, policies and good work practices. Supervisors who observe an authorized employee operating a powered industrial truck in an unsafe manner shall immediately remove that employee from the truck, take appropriate disciplinary action and prevent the employee from operating a powered industrial truck again until the employee has successfully completed refresher training by a person who has the knowledge, training and experience to train operators and evaluate their competence.

EMPLOYEES who are assigned tasks that require them to operate powered industrial trucks shall not operate a truck until they have successfully completed training conducted by a person authorized by the City of Burlington as having the knowledge, training and experience to train operators and evaluate their competence; shall follow best safe work practices once trained; and shall be empowered and required to remove from service “a powered industrial truck...found to be in need of repair, defective, or in any way unsafe...until it has been restored to safe operating condition.” [29CFR 1910.178(p)(1)]

IV. GENERAL REQUIREMENTS

Implementation of the City of Burlington Powered Industrial Truck Program shall incorporate elements of the North Carolina OSHA statutes contained in 29 CFR 1910.178 as follows:

REQUIRED:

1. Formal Instruction
2. Practical Demonstration
3. Operator Evaluation

References:

29 CFR 1910.178(l)(2)(i)

Trainees may operate a powered industrial truck only:

29 CFR 1910.178(l)(2)(i)(A)

Under the direct supervision of persons who have the knowledge, training, and experience to train operators and evaluate their competence; and

29 CFR 1910.178(l)(2)(i)(B)

Where such operation does not endanger the trainee or other employees.

29 CFR 1910.178(l)(2)(ii)

Training shall consist of a combination of formal instruction (e.g., lecture, discussion, interactive computer learning, video tape, written material), practical training (demonstrations performed by the trainer and practical exercises performed by the trainee), and evaluation of the operator's performance in the workplace.

29 CFR 1910.178(l)(2)(iii)

All operator training and evaluation shall be conducted by persons who have the knowledge, training, and experience to train powered industrial truck operators and evaluate their competence.

V. GENERAL OPERATING PROCEDURES

The general operating procedures outlined below are all safety related, affecting the Powered Industrial Truck (PIT) operator, the pedestrian or the load being transported. While many of these procedures may appear to be common sense, they should all be followed to enhance overall safety.

- If at any time a forklift is found to be in need of repair, defective or in any way unsafe, the forklift must be taken out of service until it has been restored to a safe operating condition.
- All repairs must be made by authorized personnel.
- Manufacturer's operating instructions must be understood by the operator.
- Operation of the controls must be explained and their functions demonstrated.
- Load capacity information must be explained. A forklift must never be used to lift a load beyond its capability.
- Fuel tanks must not be filled while the engine is running. Fuel spillage must be avoided.
- Any spillage of oil or fuel must be carefully washed away or evaporated. The fuel tank cap must be replaced before the engine is restarted.
- A forklift must not be operated if there is a leak in the fuel system. The leak must first be repaired.
- Seat belts are required to be worn while operating the forklift.
- The operator must always drive slowly enough to make a turn without tipping the forklift and to stop safely for pedestrians.
- Wet or slippery driving surfaces require slower than ordinary speeds.
- A forklift must be kept behind any other moving vehicle by at least three times the length of the forklift.
- The operator must not pass another vehicle at intersections, blind spots or other dangerous locations.
- The operator must slow down and sound the horn at cross aisles and other locations where vision is obstructed.
- The operator must watch for pedestrians, especially at intersections, passageways and doors leading from toilets, lunchrooms and offices.
- The operator must never drive directly toward anyone.
- Stunt driving and horseplay must not be permitted.
- A forklift may be used to elevate workers only if proper precautionary measures are taken.
- A safety platform with guardrails should be firmly secured to the forks to keep the worker from falling.
- Protection from falling objects should be provided in accordance with particular conditions.
- No one can be allowed to stand or pass under the lift portion of any forklift, whether loaded or empty, because injury may result from mechanical failure or falling objects.
- Before moving or stacking materials, the operator must survey the path of travel to avoid machinery, overhead obstructions, sprinkler systems, manufactured goods and other obstructions.
- Forklifts must not be overloaded.
- Overloading will increase the risk that a forklift will tip over and reduce the ability to control it.
- Loaders and/or operators must check the maximum load capacity on the forklift nameplate.
- Lifted loads must be neatly piled and cross-tied, if possible.
- To reduce the risk of tipping, the load must be laterally centered on the lift forks.
- Carry the load low enough to avoid striking overhead obstructions, such as doorways, electrical conduits and sprinklers.
- Carry the load only high enough to avoid raised or uneven surfaces.
- Do not raise or lower a load while the forklift is moving, lest the operator's attention is distracted from driving.
- Drive the forklift in reverse if bulky items obstruct the front view.
- Easy and gradual starts and stops help prevent loads from shifting.
- Exercise caution on inclines. Always drive with the load pointed uphill (whether ascending or descending).
- Be especially careful going downhill, so that the forklift can be brought to an emergency stop.
- Never load or park the forklift so as to block or obstruct fire aisles, fire equipment, or means of egress.
- Keep forklifts well back from the edge of loading docks and other open-sided floors.

- When the operator must leave the forklift unattended, load engaging means (mast and forks) must be fully lowered, controls must be neutralized, the power must be shut off, and the parking brake must be set. An additional safety precaution is to remove the keys.
- When an operator is dismounted and is within 25 feet of the vehicle and is in view of the vehicle, the engine may be left running. The load engaging mechanism must be fully lowered, controls must be neutralized (transmission in neutral position), and the brakes must be set.
- Wheels must be blocked if the forklift is parked on an incline.

VI. *Appendix A*

TRAINING

NC OSHA requires that “Prior to permitting an employee to operate a powered industrial truck (except for training purposes), the employer shall ensure that each operator has successfully completed the training required...” [29 CFR 1910.178(l)(ii)]

“Training shall consist of a combination of formal instruction...practical training...and evaluation of the operator’s performance in the workplace.” [29 CFR 1910.178(l)(2)(B)(ii)]

“All operator training and evaluation shall be conducted by persons who have the knowledge, training and experience to train powered industrial truck operators and evaluate their competence.” [29 CFR 1910.178(l)(2)(B)(iii)] (See Appendix A)

VI. a. TRAINING CONTENT

Powered industrial truck operators shall receive initial training in the following topics, as required by 29 CFR 1910.178(l)(3)(i):

TRUCK-RELATED TOPICS

- A. Operating instructions, warnings, and precautions for the types of truck the operator will be authorized to operate;
- B. Differences between the truck and the automobile;
- C. Truck controls and instrumentation: where they are located, what they do, and how they work;
- D. Engine or motor operation;
- E. Steering and maneuvering;
- F. Visibility (including restrictions due to loading);
- G. Fork and attachment adaptation, operation, and use limitations;
- H. Vehicle capacity;
- I. Vehicle stability;
- J. Any vehicle inspection and maintenance that the operator will be required to perform;
- K. Refueling and/or charging and recharging of batteries if applicable;
- L. Operating limitations;
- M. Any other operating instructions, warnings, or precautions listed in the operator's manual for the types of vehicle that the employee is being trained to operate.

WORKPLACE-RELATED TOPICS

- A. Surface conditions where the vehicle will be operated;
- B. Composition of loads to be carried and load stability;
- C. Load manipulation, stacking, and unstacking;
- D. Pedestrian traffic in areas where the vehicle will be operated;
- E. Narrow aisles and other restricted places where the vehicle will be operated;
- F. Hazardous (classified) locations where the vehicle will be operated (if applicable);
- G. Ramps and other sloped surfaces that could affect the vehicle's stability;
- H. Closed environments and other areas where insufficient ventilation or poor vehicle maintenance could cause a buildup of carbon monoxide or diesel exhaust (if applicable);

- I. Other unique or potentially hazardous environmental conditions in the workplace that could affect safe operation.

VI. b. COURSE MATERIAL OUTLINE

1. Introduction:
 - Why we train
 - To comply with NC law
 - To protect our employees from injury and our facilities from damage
 - What our goals are
 - To train employees to safely operate the types of forklifts used in their workplace and to help them understand the hazards to which they're exposed within that workplace.
 - How we'll train
 - Employees are expected to have the knowledge and skills required to do their jobs correctly and safely. Video, group discussions and hands-on experience will be used to help them achieve this.
2. Kinds of forklifts, what they can safely do, and how they can tip over
 - The kind of forklifts used in the employee's worksite
 - Identify the controls and what they do
 - Show where to find a data plate and what information's on it
 - How the forklift's critical measurements affect safety
 - Explain the "stability triangle" and how it can cause the forklift to tip over
3. Inspecting a forklift
 - Why inspections are necessary
 - When inspections are to be done
 - Show and explain the City of Burlington's Forklift Inspection Checklist
 - Show how to do an inspection
 - Explain what to do if the forklift fails inspection
4. Safety issues and hazards and how a forklift is different from an automobile
 - Explain the following elements of operating a forklift in this facility
 - Traffic patterns if applicable
 - Safe following distance of 3 lengths of the forklift
 - Keeping the forklift under control at all times, especially on wet, slippery or uneven surfaces
 - Hazards of driving over loose materials and slippery areas
 - Avoiding overhead obstacles, including energized power lines
 - Avoiding "jerky" steering that could dump loads or tip forklift over
 - Checking for rear-end clearance, including pedestrians, when driving in crowded conditions
5. Safely lifting, lowering and transporting loads
 - Space the forks to evenly distribute and support the load
 - Approach a load slowly, mast in vertical position, until the load touches the backrest
 - Tilt the mast backwards slightly before lifting the load
 - Lift the load only high enough (2 to 6 inches floor clearance) to safely travel
 - Reverse the above procedure when lowering and placing a load
 - Always look in the direction of travel
 - Don't lift or lower the load while traveling so center of balance isn't affected
 - Allow for rear-swing on counterweighted forklifts to avoid hitting anything or anyone
 - Watch for pedestrians...they ALWAYS have the right of way
 - Keep the load uphill when going up or down a ramp or inclined surface
 - When parking, tip the leading edges of the forks until they touch the floor
 - If possible, put the forks into/under a pallet when parking it to avoid creating a trip hazard

6. LPG and gasoline powered forklifts and their safety issues
 LPG forklifts require that the tanks be inspected for dents or other damage; the quick-disconnect coupling isn't damaged, leaking, or missing gaskets or rubber seals; that the relief valve is pointed in the right direction when installed or stored. Fueling LPG forklifts requires the use of a heavy duty glove, long sleeves and a face shield (not regular or safety glasses)
 Regular gas powered forklifts require that any spilled gasoline is cleaned up and the fuel tank cap is back in place before the forklift engine is cranked.
 Whether LPG or gasoline, the forklift must be turned off while being fueled.
 Smoking on or near a forklift, especially one that's being fueled, is dangerous. Don't do it.
7. Battery powered forklifts and their safety issues are not applicable in City of Burlington facilities.
8. Safety rules and how they can keep you from getting hurt (or hurting others)
 Safety rules have been developed because hazards have been identified that could hurt you or others. Means of avoiding injury caused by these hazards have resulted in the creation of rules that, if followed, avoid injury. Follow all safety rules to protect you and others. Report any hazards you discover to your supervisor.
9. Driving the forklift
 You will be observed by a competent instructor and your performance will be graded. You will be expected to safely perform some/all of the elements of the job you normally perform. A passing score is 85.
10. Issuing your driver's license
 Your driver's license will be issued within 5 working days of completing the course. You must have this driver's license on your person at any time you are operating a forklift for the City of Burlington and must produce it if requested by a supervisor or the Safety Director. Operating a forklift without a valid license may result in disciplinary action.

VI. c. FORKLIFT-RELATED TOPICS:

Type(s) of forklift(s) you'll drive;
 How it's different from driving a car;
 Operating instructions, warnings and precautions for the forklift(s) you'll drive;
 Controls and instruments: where they are; what they do; how they work;
 Power plant operation (gas; propane; electric) and maintenance required;
 Steering and maneuvering;
 Visibility (including loads the operator can't see around or over);
 Forks and other attachments; how they operate; what their limits are;
 Forklift load capacity (SEE APPENDIX
 Forklift stability; understanding the "stability triangle";
 Forklift inspection and maintenance;
 Forklift refueling or charging/recharging batteries;
 Operating limitations of the forklift you're driving;
 Manufacturer's instructions and warnings for the forklift you're driving.

VI. d. WORKPLACE-RELATED TOPICS:

What kind of surfaces you'll drive on;
 What kinds of loads you'll probably have to lift or move;
 Manipulating, stacking and unstacking a load;
 Pedestrian safety;
 Narrow or restricted areas in which you'll operate the forklift;
 Any hazardous areas in which you'll operate the forklift, including areas of insufficient ventilation;
 How to safely drive a forklift on a ramp or other inclined surface;
 Identifying potentially hazardous environmental conditions in which you might operate a forklift.

VI. e. DO'S AND DON'T'S OF OPERATING A FORKLIFT:

DO:

- Inspect the forklift at the beginning of every shift; complete an inspection form.
- Refuse to drive a forklift that's unsafe. Report it to the supervisor.
- Know what the manufacturer says about safely operating the forklift.
- Know what all the forklift controls are for and how they work.
- Know what the forklift's LOAD CAPACITY is.
- Know the most common reasons for a forklift to turn over.
- If you're sitting on a forklift and the engine's running, FASTEN THE SEATBELT.
- Slow down when surface conditions are wet or slippery.
- Stay at least 3 lengths behind any other vehicle you're following.
- Slow down and blow your horn at intersections or where there's a blind spot.
- Pedestrians have a death wish and always have the right of way. Watch out for them.
- Center the load you're carrying (side to side) on the forks to keep from turning over.
- Carry heavy loads against the backrest to get better traction with the rear steering wheels.
- Carry the load just high enough to clear any raised or uneven surfaces.
- If you can't see around the load you're carrying, drive backwards.
- Driving up or downhill (on a ramp, etc.), always keep the load pointed uphill.
- When shutting down (parking) a forklift:
 - Tip the forks all the way forward;
 - Lower the forks until the tips of both forks touch the driving surface;
 - Set the hand brake;
 - Put the transmission in neutral;
 - Turn the engine off;
 - Remove the key from the forklift so unauthorized persons don't attempt to drive it.
 - If parking the forklift on an incline, chock the wheels.
 - When getting off a forklift with the engine still running:
 - If there's no load on the forks, tip the forks all the way forward;
 - Lower the forks until the tips of both forks touch the driving surface;
 - If there's a load on the forks, lower the load until it rests on the work surface;
 - Set the hand brake;
 - Put the transmission in neutral;
 - Stay within 25 feet of the forklift and keep it in your sight at all times.
 - Keep all body parts inside the protective cage ("overhead guard").

DON'T:

- Operate a forklift unless you've been trained and certified by the City of Burlington to do so.
- Drive an unsafe forklift.
- Operate a forklift in an unsafe manner.
- Allow anyone to ride as a passenger on your forklift...EVER.
- Smoke on or near a forklift, especially during fueling.
- Drive toward a pedestrian who has no escape route.
- Pick up a load that's too heavy for the forklift's load capacity.
- Try to turn while on an inclined surface (ramp, etc.).
- Refuel with the engine running.

- Start the engine until the fuel tank cap is replaced.
- Operate a forklift with a leak in the fuel or hydraulic system.
- Drive faster than existing conditions and City policies allow.
- Walk or stand under a raised load.
- Allow anyone else to walk or stand under a raised load.
- Raise a load so high that it strikes overhead obstructions.
- Raise a load to a height that's within 10 feet of energized electrical transmission lines.
- Raise or lower a load while the forklift is in motion.
- Park a forklift where it would block a fire aisle, fire equipment, or path of escape.

VI. f. REFRESHER TRAINING

Refresher training, including an evaluation of the effectiveness of that training, shall be conducted as required by paragraph (l)(4)(ii) to ensure that the operator has the knowledge and skills needed to operate the powered industrial truck safely.

[1910.178(l)(4)(i)]

Refresher training in relevant topics shall be provided to the operator when:

[1910.178(l)(4)(ii)]

The operator has been observed to operate the vehicle in an unsafe manner;

[1910.178(l)(4)(ii)(A)]

The operator has been involved in an accident or near-miss incident;

[1910.178(l)(4)(ii)(B)]

The operator has received an evaluation that reveals that the operator is not operating the truck safely;

[1910.178(l)(4)(ii)(C)]

The operator is assigned to drive a different type of truck; or

[1910.178(l)(4)(ii)(D)]

A condition in the workplace changes in a manner that could affect safe operation of the truck.

[1910.178(l)(4)(ii)(E)]

VII. *Appendix B*

How to calculate Residual (Load) Capacity of a Forklift

(TEXT VERSION)

(How much weight can be safely carried by a forklift after subtracting the weight of any attachment)

$$[(B \times C) - (D \times E)] \div F = A$$

- A is Residual Capacity (how much weight can be safely carried by a forklift after subtracting the weight of any attachment).
- B is Distance from the center of the front wheels to the forklift's rated load center (24, 36 or 48 inches).
- C is Forklift's rated capacity as listed on the data plate.
- D is Distance from the center of the front wheels to the center of gravity of the attachment.
- E is Weight of the attachment.
- F is Distance from the center of the front wheels to the center of the load to be carried.

EXAMPLE:

B (48 inches) times C (5,000 pounds) = 240,000

D (36 inches) times E (326 pounds) = 11,736

240,000 less 11,736 = 228,264

228,264 ÷ 60 (inches) = 3,804 pounds that can be safely lifted and transported by the forklift, with the load centered side to side on the forks, resting flush against the load backrest, the forks tilted slightly back, and the load lifted 2 to 6 inches from the traveling surface.

VIII. Appendix C

(FORMULA VERSION)

How To Calculate the **RESIDUAL CAPACITY** Of A Forklift

The number of inches from the center of the front wheels to the “rated load center” on the forks (see data plate)

X

The forklift’s rated capacity (as listed on the data plate)

—

The distance in inches from the center of the front wheels to the center of gravity (balance point) of the attachment

X

Weight in pounds of the attachment

÷

The distance in inches from the center of the front wheels to the center of the load to be carried

=

RESIDUAL CAPACITY

(The number of pounds that can be safely carried after subtracting the weight of the attachment)

IX. FORKLIFT INSPECTION CHECKLIST (Appendix D)

North Carolina State Law CFR 1910.178(q)(7) requires that "Industrial trucks shall be examined before being placed in service, and shall not be placed in service if the examination shows any condition adversely affecting the safety of the vehicle. Where industrial trucks are used on a round-the-clock basis, they shall be examined...each shift. Defects when found shall be immediately reported and corrected."

DATE	OPERATOR'S NAME	UNIT NUMBER	HOUR METER
------	-----------------	-------------	------------

- | | | | |
|--|--|---|--|
| 1. Mast chain worn, loose or damaged? | <input type="checkbox"/> YES <input type="checkbox"/> NO | 9. Pedestrian warning strobe light work? | <input type="checkbox"/> YES <input type="checkbox"/> NO |
| 2. Any water, oil or fuel leaking? | <input type="checkbox"/> YES <input type="checkbox"/> NO | 10. Pedestrian warning back-up alarm works in reverse gear? | <input type="checkbox"/> YES <input type="checkbox"/> NO |
| 3. Any hydraulic lines leaking? | <input type="checkbox"/> YES <input type="checkbox"/> NO | 11. Engine temperature gauge in safe range? | <input type="checkbox"/> YES <input type="checkbox"/> NO |
| 4. Tires have unsafe defects? | <input type="checkbox"/> YES <input type="checkbox"/> NO | 12. Horn works? | <input type="checkbox"/> YES <input type="checkbox"/> NO |
| 5. Fire extinguisher present, inspected and usable?
(GET ON THE FORKLIFT TO COMPLETE THE INSPECTION.) | <input type="checkbox"/> YES <input type="checkbox"/> NO | 13. Less than 4 inches of "play" in steering wheel? | <input type="checkbox"/> YES <input type="checkbox"/> NO |
| 6. Does engine crank in neutral gear <u>only</u> ? | <input type="checkbox"/> YES <input type="checkbox"/> NO | 14. Parking brake prevents creeping forward or backward when transmission is in gear? | <input type="checkbox"/> YES <input type="checkbox"/> NO |
| 7. Both headlights work? | <input type="checkbox"/> YES <input type="checkbox"/> NO | 15. Foot brake stops forklift in less than 3 feet? | <input type="checkbox"/> YES <input type="checkbox"/> NO |
| 8. Both brake lights work? | <input type="checkbox"/> YES <input type="checkbox"/> NO | 16. If using attachments, do the attachments work safely? | <input type="checkbox"/> YES <input type="checkbox"/> NO |

If 6, 12, 14, or 15 are answered "NO", **DISABLE THE FORKLIFT** so that no one can operate it until it is repaired. **ANYONE** using the forklift before it is safe to operate will be subject to disciplinary action. All other items answered "NO" should be explained in writing on the back of this sheet.

Report all other problems by writing a description of the problem on the back of this sheet so the forklift mechanic can repair it.

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IX. FORKLIFT INSPECTION CHECKLIST (Appendix D)

North Carolina State Law CFR 1910.178(q)(7) requires that "Industrial trucks shall be examined before being placed in service, and shall not be placed in service if the examination shows any condition adversely affecting the safety of the vehicle. Where industrial trucks are used on a round-the-clock basis, they shall be examined...each shift. Defects when found shall be immediately reported and corrected."

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------	-----------------	-------------	------------

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| 2. Any water, oil or fuel leaking? | <input type="checkbox"/> YES <input type="checkbox"/> NO | 10. Pedestrian warning back-up alarm works in reverse gear? | <input type="checkbox"/> YES <input type="checkbox"/> NO |
| 3. Any hydraulic lines leaking? | <input type="checkbox"/> YES <input type="checkbox"/> NO | 11. Engine temperature gauge in safe range? | <input type="checkbox"/> YES <input type="checkbox"/> NO |
| 4. Tires have unsafe defects? | <input type="checkbox"/> YES <input type="checkbox"/> NO | 12. Horn works? | <input type="checkbox"/> YES <input type="checkbox"/> NO |
| 5. Fire extinguisher present, inspected and usable?
(GET ON THE FORKLIFT TO COMPLETE THE INSPECTION.) | <input type="checkbox"/> YES <input type="checkbox"/> NO | 13. Less than 4 inches of "play" in steering wheel? | <input type="checkbox"/> YES <input type="checkbox"/> NO |
| 6. Does engine crank in neutral gear <u>only</u> ? | <input type="checkbox"/> YES <input type="checkbox"/> NO | 14. Parking brake prevents creeping forward or backward when transmission is in gear? | <input type="checkbox"/> YES <input type="checkbox"/> NO |
| 7. Both headlights work? | <input type="checkbox"/> YES <input type="checkbox"/> NO | 15. Foot brake stops forklift in less than 3 feet? | <input type="checkbox"/> YES <input type="checkbox"/> NO |
| 8. Both brake lights work? | <input type="checkbox"/> YES <input type="checkbox"/> NO | 16. If using attachments, do the attachments work safely? | <input type="checkbox"/> YES <input type="checkbox"/> NO |

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X. APPENDIX E

OSHA FORKLIFT SAFETY CHECKLIST

Operator's Daily Checklist – NON-electric (Gas/LPG/Diesel Truck)

(Types D, DS, DY, G, GS, LP, LPS)

Type of truck: Sit-down, counter-balanced

SAFETY AND OPERATIONAL CHECKS (PRIOR TO EACH SHIFT)

Have a **qualified** mechanic correct all problems.

Engine OFF Checks	✓ if OK	<i>Make Notes If Maintenance Is Needed</i>
Leaks – Fuel, Hydraulic Oil, Engine Oil or Radiator Coolant		
Tires – Condition and Pressure		
Forks, Top Clip Retaining Pin and Heel – Check Condition		
Load Backrest – Securely Attached		
Hydraulic Hoses, Mast Chains, Cables and Stops – Check Visually		
Overhead Guard – Attached		
Finger Guards – Attached		
Propane Tank (LP Gas Truck) – Rust Corrosion, Damage		
Safety Warnings – Attached (Refer to Parts Manual for Location)		
Battery – Check Water/Electrolyte Level and Charge		
All Engine Belts – Check Visually		
Hydraulic Fluid Level – Check Level		
Engine Oil Level – Dipstick		
Transmission Fluid Level – Dipstick		
Engine Air Cleaner – Squeeze Rubber Dirt Trap or Check the Restriction Alarm (if equipped)		
Fuel Sedimentor (Diesel)		
Radiator Coolant – Check Level		
Operator's Manual – In Container		
Nameplate – Attached and Information Matches Model, Serial Number and Attachments		
Seat Belt – Functioning Smoothly		
Hood Latch – Adjusted and Securely Fastened		
Brake Fluid – Check Level		
Engine ON Checks – Unusual Noises Must Be Investigated Immediately	✓ if OK	<i>Make Notes If Maintenance Is Needed</i>
Accelerator or Direction Control Pedal – Functioning Smoothly		
Service Brake – Functioning Smoothly		
Parking Brake – Functioning Smoothly		
Steering Operation – Functioning Smoothly		
Drive Control – Forward/Reverse – Functioning Smoothly		
Tilt Control – Forward and Back – Functioning Smoothly		
Hoist and Lowering Control – Functioning Smoothly		
Attachment Control – Operation		
Horn and Lights – Functioning		
Cab (if equipped) – Heater, Defroster, Wipers – Functioning		
Gauges: Ammeter, Engine Oil Pressure, Hour Meter, Fuel Level, Temperature, Instrument Monitors – Functioning		

Reference: http://www.osha.gov/dcsp/ote/trng-materials/pit/daily_pit_checklist.html

XI. APPENDIX F

OSHA FORKLIFT SAFETY CHECKLIST

Operator's Daily Checklist - **ELECTRIC** Industrial Truck

Type of truck: Sit-down, counter-balanced (Types E, ES, EE, EX)

SAFETY AND OPERATIONAL CHECKS (PRIOR TO EACH SHIFT)

Have a **qualified** mechanic correct all problems.

Motor OFF Checks	✓ if OK	Make Notes If Maintenance Is Needed
Leaks – Hydraulic Oil, Battery		
Tires – Condition and Pressure		
Forks, Top Clip Retaining Pin and Heel – Condition		
Load Backrest Extension – Attached		
Hydraulic Hoses, Mast Chains, Cables & Stops – Check Visually		
Finger Guards – Attached		
Overhead Guard – Attached		
Safety Warnings – Attached (Refer to Parts Manual for Location)		
Battery – Water/Electrolyte Level and Charge		
Hydraulic Fluid Level – Dipstick		
Transmission Fluid Level – Dipstick		
Operator's Manual in Container		
Capacity Plate Attached – Information Matches Model, Serial Number and Attachments		
Battery Restraint System – Adjust and Fasten		
Operator Protection		
Sitdown Truck - Seat Belt – Functioning Smoothly		
Man-up Truck – Fall protection/Restraining means - Functioning		
Brake Fluid – Check level		
Motor ON Checks (Unusual Noises Must Be Investigated Immediately)	✓ if OK	Make Notes If Maintenance Is Needed
Accelerator Linkage – Functioning Smoothly		
Parking Brake – Functioning Smoothly		
Service Brake – Functioning Smoothly		
Steering Operation – Functioning Smoothly		
Drive Control – Forward/Reverse – Functioning Smoothly		
Tilt Control – Forward and Back – Functioning Smoothly		
Hoist and Lowering Control – Functioning Smoothly		
Attachment Control – Operation		
Horn – Functioning		
Lights & Alarms (where present) – Functioning		
Hour Meter – Functioning		
Battery Discharge Indicator – Functioning		
Instrument Monitors – Functioning		

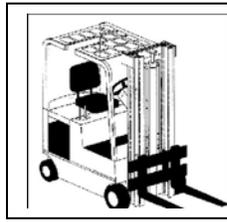
Reference: http://www.osha.gov/dcs/p/ote/trng-materials/pit/daily_pit_checklist.html

XII. OSHA Recognizes Seven Classes of Powered Industrial Trucks (Appendix G)

Class I—Electric Motor Rider Trucks

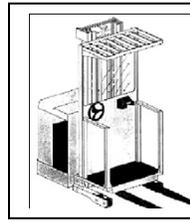


Electric Counterbalanced Stand-Up

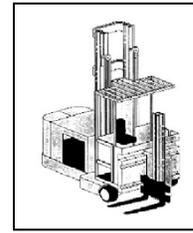


Electric Sit-down Rider

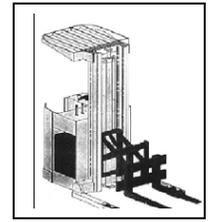
Class II—Electric Motor Narrow Aisle Trucks



Order Picker

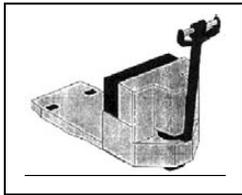


Turret Truck

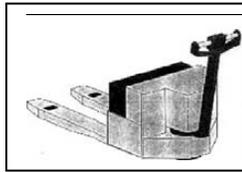


Reach Type Outrigger

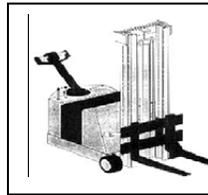
Class III—Electric Motor Hand or Hand/Rider Trucks



Low Lift Platform



Low Lift Walkie Pallet



High Lift Counterbalanced

Class IV—Internal Combustion Engine Trucks—Cushion (Solid) Tires



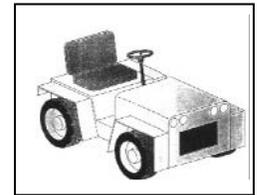
Sit-down Rider LPG Gas

Class V—Internal Combustion Engine Trucks—(Pneumatic) Tires



Sit-down Rider Gasoline

Class VI—Electric and Internal Combustion Engine Tractors



Class VII—Rough Terrain Forklift Trucks



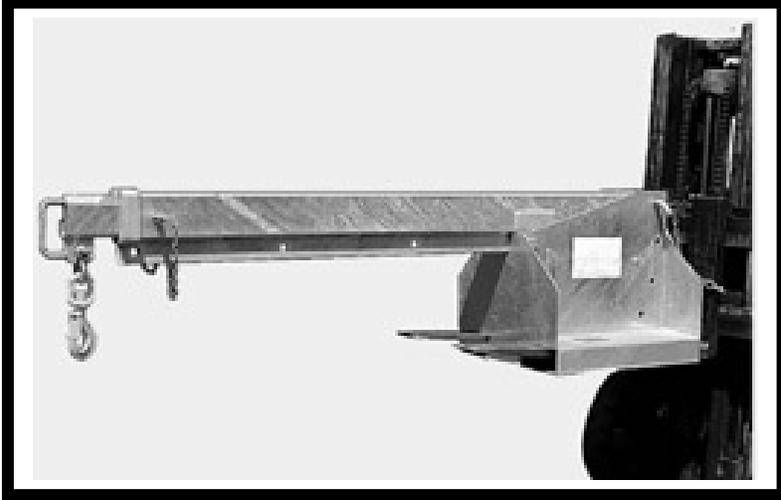
Straight Mast



Extended Reach

Source:
<http://www.dol.state.nc.us/osh/etta/indguide/ig12.pdf>

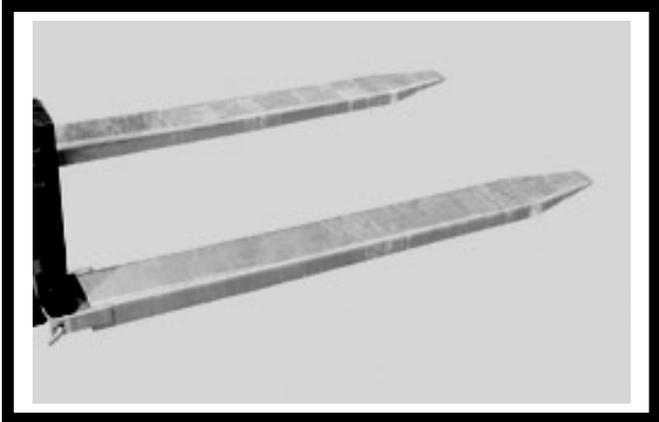
Some Forklift Attachments Used by the City of Burlington



FORKLIFT JIB



**FORKLIFT WORK
PLATFORM**



FORK EXTENSIONS ("SLIPPERS")



FORKLIFT DRUM HANDLER

**XIV. Appendix I
POWERED INDUSTRIAL TRUCK
TRAINING**

City of Burlington

Written Test

Content and/or a copy of the written test is available to authorized persons by contacting the City of Burlington Safety Director.

XV. Appendix J

POWERED INDUSTRIAL TRUCK TRAINING

City of Burlington

Instructor Qualifications Information

Name: Bob Finley

Address: City of Burlington Human Resources
425 Lexington Avenue
Burlington, NC 27216

Telephone: 336-513-5463

E-mail: bfmley@ci.burlington.nc.us

Qualifications: per 29 CFR 1910.178(l)(A)

The instructor has the “knowledge, training and experience to train operators and evaluate their competence” in the subject matter covered by the elements contained in the training program as it relates to the workplace that the training will address, specifically: having familiarity with the OSHA standard; having access to and familiarity with the City of Burlington Safety Policies and Procedures as they apply to Powered Industrial Trucks; having access to and familiarity with the job descriptions on file in the Human Resources department as they relate to jobs requiring operation of a powered industrial truck; having familiarity with NIOSH publication number 2001-109 titled “NIOSH Alert: Preventing Injuries and Deaths of Workers Who Operate or Work Near Forklifts” (found on the NIOSHA website <http://www.cdc.gov/niosh/2001-109.html#6>), and having instructed employees in operation of powered industrial trucks for over 10 years.