

FEBRUARY 1, 2021



UNC CHARLOTTE

Environmental Health and Safety

POWERED INDUSTRIAL TRUCKS (FORKLIFT)
PROGRAM

UNC CHARLOTTE
9201 UNIVERSITY CITY BLVD., CHARLOTTE, NC 28223

Table of Contents

I. Introduction	3
II. Purpose	3
III. Scope	3
IV. Definitions	3
V. Program Responsibilities	3
VI. Authorized Powered Industrial Truck Operators	4
VII. General Requirements	5
VIII. Purchase Rental Agreement	5
IX. Pre-Use Inspection	6
X. Worksite Inspection	6
XI. Training	7
XII. Maintenance	8
XIII. Recordkeeping	9
Appendix A – Pre-Use Inspection Form	11
Appendix B – Forklift Classification Chart	14

I. Introduction

Powered Industrial Trucks, commonly called forklifts pose a serious safety hazard if not used properly. They are used to move materials. They are used to raise, lower, or remove large objects or a number of smaller objects on pallets or in boxes. It is the policy of the University of North Carolina at Charlotte to train employees on the hazards, how to operate forklifts safely and to ensure such equipment is safely maintained.

II. Purpose

The purpose of this program is to comply with Occupational Safety and Health Administration (OSHA) Powered Industrial Trucks standard – 29 CFR 1910.178 compliance regulation.

III. Scope

This program applies to all employees and students operating forklifts on UNC Charlotte's campus.

IV. Definitions

Fork Truck: Also called forklift truck, a fork truck is a small vehicle with two power-operated prongs at the front that can be slid under heavy loads and then raised for moving and stacking. Fork trucks can be powered by electricity, compressed natural gas, liquid petroleum gas, diesel fuel, or gasoline.

Powered Industrial Trucks: Any mobile power-propelled truck used to carry, push, pull, lift, stack or tier materials. Powered industrial trucks can be ridden or controlled by a walking operator.

Certified Operator: Certification of forklift operators at UNC Charlotte requires completing initial and refresher training. Once the employee has successfully completed they are considered to be a certified operator.

Competent Trainer: An employee who has the knowledge, training, and experience to train powered industrial truck operators and evaluate their competence. A contractor or equipment vendor who has experience training forklift safety and operation and is familiar with the equipment is also permitted to be a Competent Trainer.

V. Program Responsibilities

A. Executive Leadership

The University of North Carolina at Charlotte has legal responsibility for compliance with the occupational safety and health standards.

B. Program Administrator

The Environmental Health and Safety Office (EHS) is responsible for:

1. Planning and recommending programs that adhere to all applicable federal, state, and local laws and regulations pertaining to environmental health and safety.
2. Assisting supervisors with implementing environmental health and safety programs in their areas.
3. Curtailing or stopping work that pose a clear and imminent danger to the health or safety of the University community.
4. Periodically reviewing the program and updating it as needed to ensure compliance with all applicable federal and state regulations.

C. Departmental Management

Management is responsible for:

1. Planning and developing budget requests for departmental safety programs.
2. Developing safety procedures, work practices, and safe working areas for all those under their supervision.
3. Supporting safety and health as a model to those they supervise.
4. Supplying appropriate equipment and training.
5. Enforcing environmental health and safety regulation by invoking disciplinary action or administrative sanction.

D. Employees

Every UNC Charlotte employee is responsible for conducting himself/herself in accordance with this program. All employees shall:

1. Adhere to all safety programs, procedures, and practices while performing his/her duties in a safe manner.
2. Notifying your immediate supervisor of unsafe working conditions, potential hazards, and accidents as soon as possible.

E. Contractors

Contractors and vendors are required to develop their Occupational Safety and Health Administration (OSHA) compliance program and adhere to compliance regulations.

VI. Authorized Powered Industrial Truck Operation

- A. Completion of course material and hands on training prior to operating a powered industrial truck/forklift.
- B. Performing powered industrial truck pre-use inspections.
- C. Reporting all vehicle maintenance issues to their supervisor and removing the equipment from service if necessary.
- D. Operating and maintaining equipment in a safe manner at all times.
- E. Adhere to the manufacture's operating manual and all provisions in this program.
- F. Conduct a worksite visual inspection and consult with your supervisor and/or the EHS

Office regarding any unusual hazards.

VII. General Requirements

- A. Operators shall review and follow the manufacturers' operating manual.
- B. Only certified operators shall operate a forklift.
- C. Operators shall follow safe work practices when operating a forklift.
- D. Vehicles are operated at a safe speed. Speeds are adjusted to compensate for surface conditions, visibility, load weight, vehicle or pedestrian traffic or any other circumstances affecting safe operation.
- E. Accidents shall be reported immediately to the Supervisor and the EHS Office.
- F. Maintenance or repair activities are to be performed by a qualified service technician. Maintenance shall be conducted according to the manufacturers' recommendations.
- G. Riders are prohibited on forklifts.
- H. Persons may not be lifted with forklifts unless a commercially manufactured forklift work platform is used.
- I. Persons are not allowed to pass under raised forks.
- J. Horseplay or unsafe driving is not tolerated.
- K. Operators do not place any part of their body between the mast and fork back support at any time.
- L. Only attachments approved and listed by the manufacturer may be used.
- M. Smoking, open flames or spark producing activities are prohibited in designated refueling or battery charging areas.
- N. Forklifts are parked with the engine off, forks lowered and parking brake engaged prior to refueling or battery charging.
- O. Propane tank refilling and replacement is only performed outside.
- P. Battery charging or replacement is not performed in locations that obstruct access to exits.
- Q. Only handle stable and safely arranged loads; secure unstable loads.
- R. Never lift or carry loads that exceed the rated capacity listed on the nameplate of the vehicle.
- S. Check the rated capacity of the trailer before entering to ensure that it can support the combined weight of the forklift and load.
- T. Never carry anything on the overhead guard.
- U. Never tilt the load forward unless depositing it onto a rack or stack.
- V. Unsecured items shall not be transported in the cab of the vehicle.
- W. Always wear your seat belt.
- X. Use of mobile technology devices (i.e., cell phone, In-ear headphones, tablets) is prohibited while operating a forklift.
- Y. The Forklift cannot be altered in any manner, unless written approval has been received by the manufacturer.
- Z. Use caution on grades, ramps, or inclines. Operators should travel straight up and down, keeping the load upslope.

VIII. Purchase Rental Agreement

Prior to purchasing or rental of any forklift, the proposed purchase order must be reviewed and approved by the Environmental Health and Safety (EHS) office. This is to ensure that the equipment is appropriate for the job task being performed, the atmosphere in which the equipment will be utilized, training is coordinated, and the following minimum safety equipment is present:

- a) Data Plate
- b) Overhead Guard
- c) Load backrest
- d) Seat Belt – for sit down operated forklifts
- e) Horn
- f) Headlights
- g) Audible back-up indicator
- h) Strobe light – to indicate engine is running
- i) Headlights
- j) Emergency brake
- k) Speed Control – for motorized pallet jacks

IX. Pre-Use Inspection

A pre-use inspection of the forklift must take place before each daily use to assist in preventing forklift incidents that are caused by faulty or worn out equipment. Forklifts that are not in good operating condition shall be removed from service until the proper repairs have been made by an authorized and trained maintenance technician. The pre-use inspection shall cover the following:

- A. Operators shall verify that all brakes, controls, gauges, lights, seat belts, horns, strobe light, backup alarm, tires and wheels, emergency controls, and routine operational features are in proper working order. Defects when found shall be immediately reported and corrected before use continues.
- B. Operators shall verify that forklifts have a nameplate listing lift category, load rating, and load center prominently affixed. Defects when found shall be immediately reported and corrected before use continues.
- C. Operators shall remove the truck from service any time it is found to need repair, defective or in any way unsafe, the truck will be taken out of service until it has been restored to safe operating condition.
- D. Operators shall check for leaks before starting the vehicle. Report deficiencies to the Supervisor and tag out of service until repairs have been made.
- E. Operators shall verify that a driver cage is installed to protect the operator from falling materials.

X. Worksite Inspection

Operators will visually inspect the worksite to remove hazards before and during forklift use. The worksite will be inspected for hazards such as:

- A. Overhead obstructions and high voltage hazards.
- B. Slope(s), ditches, bumps, debris, drop-offs and floor obstructions.
- C. Weather conditions.
- D. Other hazardous locations and atmospheres.
- E. Inadequate support (The working surface that the lift is sitting on cannot support the weight of the machine, men, etc. for the operation).

- F. Presence of unauthorized persons or other hazardous conditions.
- G. Before entering a trailer with a forklift, ensure that the trailer brakes are locked, the rear wheels are chocked and the deck plate or bridge plates are secure. Dock board or bridge plates shall be driven over carefully and slowly and their rated capacity never exceeded.
- H. Running over loose objects on the roadway surface shall be avoided.
- I. Shall ensure propane / fuel tank is properly secured to the forklift.

The EHS office is available to assist with determining if there are any unusual hazards in areas where lifts will be used.

XI. Training

Powered Industrial Training is required initially for all employees operating a powered industrial truck safely, as demonstrated by the successful completion of the training.

A. Initial Training:

Supervisors must ensure all operators are adequately trained prior to operating a powered industrial truck. Training must consist of both formal instruction and practical evaluation.

a. Formal Instruction:

Includes lecture, discussion, interactive computer learning, video, and or written training and must consist of the following elements, when applicable:

- a) Specific manufacturers' operating manual instructions, warnings, limitations, and precautions specific to the type of powered industrial truck to be utilized by the operator;
- b) Differences between the powered industrial truck and a vehicle;
- c) Equipment controls and instrumentation including their location and proper operation;
- d) Operating the motor/engine;
- e) Steering and maneuverability;
- f) Visibility, including limitations when loading/unloading;
- g) Fork use and attachment adaptation, operation and limitations (when applicable);
- h) Vehicle capacity and stability limitations;
- i) Completing equipment pre-use inspections;
- j) Refueling and/or battery changing/charging; and
- k) Specific workplace operation of the powered industrial truck including the following:
 1. Surface conditions where the vehicle will be operated
 2. Handling loads specific to the operation of the powered industrial truck
 3. Operating in narrow aisles and/or around pedestrian traffic
 4. Operating on sloped surfaces
 5. Ventilation while using powered industrial trucks
 6. Use restrictions based on hazardous locations

b. Practical evaluation:

Includes demonstration performed by the trainer and practical exercises performed by the trainee in order to ensure competence by the operator when utilizing a powered industrial truck.

Practical evaluation should be conducted utilizing the powered industrial truck(s) to be used by the operator. Practical evaluation should simulate typical work to be conducted with the powered industrial truck and may consist of the following:

- a) Performing pre-use inspections
- b) Safe operation of the industrial truck
- c) Handling a load
- d) Maneuverability

B. Refresher training:

Refresher training may be necessary due to certain circumstances as follows:

- a) The operator is observed operating the vehicle in an unsafe manner
- b) The operator is involved in an accident or near-miss incident
- c) The operator receives an evaluation revealing unsafe practices
- d) There is a change in workplace conditions affecting the safe operation of an industrial truck
- e) The operator is assigned to drive a different type of truck
- f) Every 3 years

NOTE: Powered Industrial Truck operators must be certified prior to operating a powered industrial truck. The initial and refresher training serves as documentation for this certification.

XII. Maintenance

Periodic (depending on activity, severity of service and environment) maintenance evaluations shall be performed by the manufacturer or authorized representative. The items listed in the owners' manual shall be tested, evaluated and, if applicable, corrected by qualified personnel before the forklift is returned to service. Forklifts shall not be operated if they are out of compliance with manufacturer specifications. Modifications or disabling of safety devices, such as warning beepers, guards or interlocks is prohibited. Moreover,

- A. Any powered industrial truck found not safe for operation must be immediately removed from service.
- B. Maintenance to be conducted on any powered industrial truck shall not be performed in a hazardous location.
- C. All repairs shall be made by an authorized service technician.
- D. Powered industrial trucks shall be deemed safe for operation following all maintenance activities.

XIII. Recordkeeping

The EHS office will maintain training records and issue certificates of training to authorized powered industrial truck operators who have successfully completed the training requirements of this program.

Each department shall maintain records of the inspections and repairs to their forklift equipment. All maintenance records shall be available for review by the EHS Office.

Appendices

Appendix A – Forklift Pre-Use Inspection Form

UNC Charlotte Environmental Health and Safety

Forklift Pre-Use Inspection Form (LPG/Diesel Forklifts)

Department:

Equipment #:

Month/Year:

Instructions: Complete the department, equipment number, and month/year section. Inspect items (A-Q) on the forklift inserting a not applicable (N/A), check mark (✓) for good and (X) indicating repair needed for the specific day of the month. The operator's initial and any comments should be included below and form affixed to forklift.

NOTE: If any item is marked with an (X) you must tag the forklift out of service (sign on steering wheel), and report it to your supervisor.

Inspection items	Day of the Month														
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
✓ = Good N/A=Not Applicable X = Repair															
A.) Visually inspect worksite.															
B.) Check for broken, missing or damaged parts and loose or missing fasteners.															
C.) Check that no safety switches have been bypassed and no warning tags have been placed on the vehicle.															
D.) Check lights, mirrors and windows for cleanliness and damage.															
E.) Check safety signs, nameplate and special instructions are legible.															
F.) Check tires for cuts, bulges, and correct pressure.															
G.) Check forks for misalignment, welds, cracks, and attachments.															
H.) Check forks top clip retaining pins and heel are in place.															
I.) Check cleanliness of engine and radiator.															
J.) Check engine oil and cooling system for proper levels.															
K.) Check level of hydraulic system.															
L.) Check hydraulic hoses and hose connections for wear and leaks.															
M.) Check overhead and other guards are attached.															
N.) Check steps, pedals, and non skid surfaces for damage.															
O.) Check condition of seat belt.															
P.) Check service and parking brakes for proper operation.															
Q.) Check gauges, controls, back-up alarm, horn, and lights for proper operation.															
OPERATOR INITIALS															

COMMENTS:

UNC Charlotte Environmental Health and Safety

Forklift Pre-Use Inspection Form (LPG/Diesel Forklifts)

Department:

Equipment #:

Month/Year:



Instructions: Complete the department, equipment number, and month/year section. Inspect items (A-Q) on the forklift inserting a not applicable (N/A), check mark (✓) for good and (X) indicating repair needed for the specific day of the month. The operator's initial and any comments should be included below and form affixed to forklift.
NOTE: If any item is marked with an (X) you must tag the forklift out of service (sign on steering wheel), and report it to your supervisor.

Inspection items	Day of the Month															
	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
✓= Good N/A=Not Applicable X = Repair																
A.) Visually inspect worksite.																
B.) Check for broken, missing or damaged parts and loose or missing fasteners.																
C.) Check that no safety switches have been bypassed and no warning tags have been placed on the vehicle.																
D.) Check lights, mirrors and windows for cleanliness and damage.																
E.) Check safety signs, nameplate and special instructions are legible.																
F.) Check tires for cuts, bulges, and correct pressure.																
G.) Check forks for misalignment, welds, cracks, and attachments.																
H.) Check forks top clip retaining pins and heel are in place.																
I.) Check cleanliness of engine and radiator.																
J.) Check engine oil and cooling system for proper levels.																
K.) Check level of hydraulic system.																
L.) Check hydraulic hoses and hose connections for wear and leaks.																
M.) Check overhead and other guards are attached.																
N.) Check steps, pedals, and non skid surfaces for damage.																
O.) Check condition of seat belt.																
P.) Check service and parking brakes for proper operation.																
Q.) Check gauges, controls, back-up alarm, horn, and lights for proper operation.																
OPERATOR INITIALS																

COMMENTS:

Appendix B – Forklift Classification Chart

Forklift Classification Chart

<p>CLASS I</p> <p>ELECTRIC MOTOR COUNTERBALANCED RIDER TRUCK</p>		<p>These forklifts can be equipped with either pneumatic or cushion tires. The pneumatic tired models are for use in dry and outdoor environments. The cushion tires are intended for smooth floors and indoor environments.</p>
<p>CLASS II</p> <p>ELECTRIC MOTOR NARROW AISLE TRUCKS</p>		<p>These forklifts are intended for floors with narrow aisles typically found in warehouses. They are designed to minimize space occupied by the lift truck and improve efficiency and speed.</p>
<p>CLASS III</p> <p>ELECTRIC MOTOR HAND TRUCKS</p>		<p>These are hand-controlled, battery powered forklifts. The operator stands in front of the truck and controls the lift through a steering tiller.</p>
<p>CLASS IV</p> <p>INTERNAL COMBUSTION COUNTERBALANCE TRUCKS (CUSHION TIRES)</p>		<p>These forklifts are used typically inside on smooth dry floors for transporting palletized loads to and from the loading dock and the storage area.</p>
<p>CLASS V</p> <p>INTERNAL COMBUSTION COUNTERBALANCE TRUCK (PNEUMATIC TIRES)</p>		<p>These fork trucks are commonly found in warehouses. These lifts can be powered by Gasoline, LPG, or Diesel Fuel.</p>

<p>CLASS VI</p> <p>ELECTRIC & INTERNAL COMBUSTION TOW TRACTORS</p>		<p>These trucks can be used in a variety of applications such as in airports. They are designed for either outdoor or indoor environments.</p>
<p>CLASS VII</p> <p>ROUGH TERRAIN FORKLIFT TRUCKS</p>		<p>Rough terrain forklifts are fitted with large floatation tires for outdoor use on difficult surfaces. These fork trucks are typically found on construction sites to lift and transport building materials to various job site locations.</p>