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**SAFETY POLICY & PROCEDURE**

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**Powered Industrial Trucks**

**SPP# 1910.178**

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## 1.0 Purpose

The purpose of this safety policy and procedure is to establish guidelines for Powered Industrial Trucks (PIT) better known as Forklifts within the North Carolina Department of Transportation (NCDOT).

## 2.0 Scope and Applicability

This safety policy and procedure provides guidelines for safe PIT operations to protect NCDOT employees from hazards associated with material handling when using Forklifts and Electric Powered Pallet Jacks. It includes provisions for training, brief discussion of general hazards of Powered Industrial Truck operations, a listing of some of the common operations, and recommended safe work practices.

This document also details the areas of responsibility for managers/unit heads, supervisors, Powered Industrial Truck operators and Safety and Risk Management within NCDOT.

This safety policy and procedure affects all NCDOT employees that operate PIT.

## 3.0 Reference

This policy is established in accordance with Occupational Safety and Health Standards for General Industry (29 CFR 1910.178 Occupational Safety and Health Standards for Construction Industry (29 CFR 1926.602).

## 4.0 Policy

It is the policy of NCDOT to provide a place of employment that is free from recognized hazards that cause or are likely to cause death or serious physical harm to employees or the public. When PIT hazards exist that cannot be eliminated, then engineering practices, administrative practices, safe work practices, Personal Protective Equipment (PPE), and proper training regarding PIT Operations will be implemented. These measures will be implemented to minimize those hazards to ensure the safety of employees and the public.

## 5.0 General Responsibilities

It is the responsibility of each manager/unit head, supervisor, and employee to ensure implementation of NCDOT's safety policy and procedure on PIT. It is also the responsibility of each NCDOT employee to report immediately any unsafe act or condition to his or her supervisor. Specific responsibilities are outlined under Section 6.3.

## 6.0 Procedure

This section provides applicable definitions, establishes general provisions, and identifies specific responsibilities required by NCDOT's safety policy and procedure on MEWP Operations.

## 6.1 Definitions

### **Electric Powered Pallet Jack**

Electric motor pallet jack controlled by operator walking behind it.

### **Powered Industrial Truck (PIT)**

Any mobile, power-propelled (electric or combustion engine) truck used to carry, push, pull, lift, stack, or tier materials, whether ridden by the operator or controlled by a walking operator.

### **Unattended**

The powered industrial truck operator is 25 ft. or more away from the vehicle which remains in his view, or whenever the operator leaves the vehicle and it is not in his view.

## 6.2 General Provisions

This section details the provisions of this safety policy and procedure with each provision discussed in a separate subsection. These provisions are:

- Training
- Types of PIT (Powered Industrial Trucks)
- PIT Hazards
- PIT Operations
- PIT Safe Work Practices

### 6.2.1 Training

The training process for PIT operators shall first be instructed in the classroom on the recognition and avoidance of hazards associated with PIT operation. Upon completion of the classroom portion, the operator will be trained using OJT (on the job training) to operate the PIT they will using. The employee must demonstrate they can operate the forklift safety using a skills demonstration by their supervisor or a Certified Forklift operator. Upon completion of the classroom safety training and successful demonstration of skills test the employee will become a Certified Forklift Operator.





Completion of Safe Forklift Operation (SAF 240) course which includes the Skills Evaluation portion will be documented in their LMS training transcripts using the NC Learning Center database for training records.

The forklift operator is required to complete the Safe Forklift Operation Skills Evaluation every (3) years to maintain their Forklift Certification. The LMS system will automatically send a notice to the employee and their immediate supervisor prior to expiration of the certification. The employee must be evaluated and documented in LMS as completing Safe Forklift Operation Evaluation (SAF 241) to retain their Certification.

If the Forklift Operator is involved in an accident with their forklift or observed operating it unsafely, they will be required to take the Safe Forklift Operation Refresher class (SAF 241) including the Skills Evaluation portion to retain their Forklift Certification.

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## 6.2.2 PIT Types for DOT

Electric Powered Industrial Truck, Class 1, Type E Designation	
	The electric powered sit-down rider forklift is the most common PIT used throughout NCDOT. Primarily used in warehouses or applications to move pallets of materials or equipment.
LP Gas Powered Industrial Truck, Class IV/V, Type D/LP/G Designation,	
	Diesel, LP gas and Gasoline powered sit-down rider forklift are other common PIT used throughout NCDOT. Primarily used in warehouses or applications to move pallets of materials or equipment.
Electric Powered Pallet Jack, Class III	
	The electric powered pallet jack is considered a PIT and is used in some NCDOT warehouse applications. Training, safe operation evaluation and certification is still required.
Rough Terrain Forklift Truck, Class VII	
	The rough terrain forklift is primarily used on DOT construction projects for material handling.

### 6.2.3 PIT Hazards

The primary hazards associated Powered Industrial Trucks when material handling include:

- The risk for tip over when making traveling too fast, making sharp turns, traveling on ramps and handling unbalanced loads.
- Traveling off loading docks.
- Striking pedestrians or pinning individuals against a fixed object.
- Striking overhead hazards or fixed objects.

This list is not all inclusive. There are many other various hazards that arise with each situation and that must be properly anticipated, recognized, avoided, and controlled.

### 6.2.4 PIT Operations

Safely operating a forklift requires preparation, anticipation and careful attention in order to maintain control of the vehicle at all times. This section will identify recommended safe practices associated with each of the following operations:

- Daily Pre-Operational Check Prior to Use
- PIT Operation
- Load Handling

#### Daily Pre-Operation Check Prior to Use

- Visual inspection as applicable for type of PIT – leaks, tires, cables, battery, belts, hoses, forks, backrest, mast, overhead guard, seat belt , engine/power source, nameplate and warning labels legible.
- Operational check as applicable for type of PIT with power on - horn, gauges, warning lights, controls, lights and parking brake.
- Document using Forklift Pre-Trip Book kept with the forklift.

#### PIT Operation

- Use three points of contact when mounting and dismounting.
- Always wear seat belt.
- Always ensure your travel path is clear.
- Sound your horn when backing, at intersections and when your view is obstructed.
- When parking and leaving the PIT unattended, park a safe distance from stairs, fire extinguishers, electrical panels, rest rooms as to block employee access, set the parking brake, lower forks to ground and turn off the ignition. If parking on an incline, block the wheels.
- Never travel with load or empty forks or lo elevated. Keep forks no more than 6 inches from the ground.
- Travel at a speed that will allow you to stop in a safe manner. Reduce speed when turning.
- Stunt driving and horseplay shall not be permitted.
- Slow down for wet or slippery floors.
- Allow plenty of room for pedestrians and slow down when approaching them. Never drive up to anyone standing in front of a fixed object.

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- Never allow anyone to stand or pass under the elevated portion of any truck, whether loaded or empty.
- Never carry passengers.
- Keep arms, legs and other body parts inside confines of forklift structure.
- Never pass another forklift.
- Be careful around loading docks; stay away for edges.
- Slow down and sound horn at intersections.
- Look in direction of travel. If traveling in reverse, look backwards.
- In the event of event of a tip over, don't jump from the forklift. Stay in the forklift, holding the steering wheel and leaning away from the impact.

### **Load Handling**

- Prior to picking up a load, make sure the weight does not exceed the capacity listed on the PIT nameplate.
- Adjust the forks as far apart as possible when picking up the load to evenly distribute the weight.
- Drop the forks and position them slowly under the load, driving forward until the load rests against the backrest.
- Only raise the load when the PIT has stopped.
- For forklifts, stabilize the load by tilting it back so it stays tight against the backrest.
- If picking up a load from a storage rack, watch for overhead obstructions when raising forks to pick up the load, back out slowing and lower the load to prepare to travel.
- Keep load at the no more than 6 inches from the ground..
- If you drive on a ramp with a load, keep the load on uphill side. If you drive on a ramp without a load, the forks should always face downhill regardless of direction of travel.
- Avoid turning on ramps which increases the chance for possible tip-over.

### **6.2.5 PIT Safe Work Practices**

The following safe work practices shall be followed when operating a PIT.

- A safe distance must be maintained from the edge of ramps or platforms while on any elevated dock, or platform.
- Brakes must be set and wheel blocks must be in place to prevent movement of trucks, trailers, or railroad cars while loading or unloading.
- The condition of flooring in trucks and trailers must be checked before they are driven onto.
- Trailers must be parked squarely to the loading dock and have wheels chocked in place. Operators will follow established docking/un-docking procedures.
- Fixed jacks may be necessary to support a semitrailer and prevent unpending during the loading or unloading when the trailer is not coupled to a tractor.
- When loading trailers, dock plates will be used. Operators will ensure dock plates are in good working condition prior to use.

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- There must be sufficient headroom under overhead installations, lights, pipes, sprinkler system, etc.
- An overhead guard must be used as protection against falling objects. It should be noted that an overhead guard is intended to offer protection from the impact of small packages, boxes, bagged material, etc., representative of the job application, but not to withstand the impact of a falling capacity load.
- A load backrest extension must be used whenever necessary to minimize the possibility of the load or part of it from falling rearward.
- Only approved industrial trucks will be used in hazardous locations.
- Always look in the direction of travel. If traveling with a load that blocks your forward view, travel in reverse. Use a spotter if necessary.
- Travel at a safe speed. Never pass another forklift.
- Never travel with any portion of your body outside the protective frame.
- Sound the horn at all intersections. Pedestrians have the right of way so constantly be on alert for them.
- Never approach someone head-on who's standing in front of a fixed object. Approach parallel instead.
- Never allow anyone to walk under raised forks.
- Never allow anyone to ride on forklift unless designed for passengers.
- Never allow anyone to ride on an electric powered pallet jack.

### **Fuel Handling and Storage**

- The storage and handling of liquid fuels such as gasoline and diesel fuel must be in accordance with NFPA 30 Flammable and Combustible Liquids Code.
- The storage and handling of liquefied petroleum gas fuel must be in accordance with NFPA Storage and Handling of Liquefied Petroleum Gases
- Fuel tanks must not be filled while the engine is running. Spillage must be avoided.
- Spillage of oil or fuel must be carefully washed away or completely evaporated and the fuel tank cap replaced before restarting engine.
- No powered industrial truck will be operated with a leak in the fuel system until the leak has been corrected.
- Personal protective equipment (approved face shield, goggles, gloves) must be worn during all refueling operations, propane tank change-outs, and any other potentially hazardous operation.

### **Changing and Charging Batteries**

- Batteries must be changed or charged in areas designated for that purpose that provides for flushing and neutralizing spilled electrolyte, for fire protection, for protecting charging apparatus from damage by trucks, and for adequate ventilation for dispersal of fumes from gassing batteries.
- Powered industrial trucks must be parked and the brake applied (if applicable) before attempting to change or charge batteries.

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- Personal protective equipment (approved face shield, goggles, gloves) must be worn during all battery filling/charging operations and any other potentially hazardous operation.
- Care must be taken to assure that vent caps are functioning. The battery (or compartment) cover(s) must be open to dissipate heat.
- Precautions must be taken to prevent open flames, sparks, or electric arcs in battery charging areas.
- Tools and other metallic objects must be kept away from the top of uncovered batteries.
- The water level in the batteries will be checked after each charging cycle (i.e. whenever the charger is disconnected from the powered industrial truck), and water added as necessary.

CAUTION: If water is added immediately prior to a charging cycle, the water could overflow and cause an acid release as the battery is heated during that charging cycle.

### 6.3 Specific Responsibilities

#### 6.3.1 Managers/Unit Heads

Managers/Unit Heads will ensure effective implementation of this procedure in their respective area of responsibility.

Managers/Unit Heads will provide budget to obtain and coordinate the required training for the affected employees.

Managers/Unit Heads will ensure that supervisors are capable of recognizing and taking steps to avoid exposing any employee to PIT hazards during operation.

#### 6.3.2 Supervisors

Supervisors will ensure that all forklift operators have received the required safety training and OJT to obtain Forklift Certification prior to operating a forklift.

Supervisors will automatically be notified by LMS learning system prior to their employees' Forklift Certification expiring after 3 years to have them complete the 3-year evaluation of skills (SAF-242) to maintain their Forklift Certification. The supervisor or a Certified Forklift operator can perform the evaluation of skills which must be documented in their LMS training transcripts.

If supervisors have an employee involved in a forklift accident or observe them operating a forklift in an unsafe manner, they shall require them to take the Safe Forklift Operation Refresher Training (SAF-241).

Supervisors will ensure all PITs are in good working condition and maintained and that forklift operators complete pre-operational checks prior to use.

### **6.3.3 Forklift Operators**

Forklift operators are responsible for completing safety training, OJT, and skills evaluation to obtain Forklift Certification. They will automatically be notified by LMS learning system prior to their Forklift Certification expiring after 3 years to complete the 3-year evaluation of skills (SAF-242) to maintain their Forklift Certification.

Forklift operators shall conduct and document PIT daily pre-operational checks prior to use. Inform supervisor of any defects or repairs required and when forklift has been removed from service.

Forklift operators shall report all incidents involving PIT to supervisor and completed required Employee Incident Report.

### **6.3.4 Safety and Risk Management**

Safety and Risk Management will provide prompt assistance to manager/unit heads, supervisors, or others as necessary on any matter concerning this safety policy and procedure. Safety and Risk Management will assist in developing or securing the required training.

Safety Engineers will provide consultative and audit assistance to ensure effective implementation of this safety policy and procedure.