Table of Contents

Section I
Purpose
of the Plan

Introduction

Powered Industrial Trucks are rugged vehicles that save time, money and effort. For the purposes of this policy and procedure a "Powered Industrial Truck" (PIT) is defined as a mobile, power-driven vehicle used to carry, push, pull, lift, stack, or tier materials, whether ridden or controlled by an operator. At Hilscher-Clarke this would include, but not me limited to:

- Forklifts;
- Pallet Trucks;
- Platform Lift Trucks;
- Motorized Hand Trucks;
- Other specialized industrial trucks, powered by electric motors or internal combustion engines.

Vehicles that are not considered to be Powered Industrial Trucks by Hilscher-Clarke include the following:

- Manual Pallet Jacks;
- Compressed Air or Nonflammable Compressed-Gas-Operated Industrial Trucks;
- Vehicles intended primarily for earth moving or over-the-road hauling.

The use of safety and protective devices is an important factor in the safe design and operation of PIT's. Therefore all Powered Industrial Trucks rented or purchased by Hilscher-Clarke, or utilized by a Hilscher-Clarke subcontractor on a Hilscher-Clarke controlled work site, must be designed, constructed and tested so as to be in compliance with ANSI (American National Standards Institute) B56 series standard. At a minimum this would include, but not be limited to:

- Nameplate(s) and marking (i.e., capacity information, limitations);
- Warning Devices (i.e., lights or blinkers, sound-producing devices, motion alarms);
- Overhead Guards (required when a falling-object hazard exists for the operator); and
- On-board, sealed fire extinguishers (i.e., ABC rated fire extinguisher).

In order to ensure the safety of all individuals on a worksite, Hilscher-Clarke, expressly forbids any employee, subcontractor, or vendor (regardless of status; i.e., supervisor, hourly, etc.) who has not been properly trained, licensed, and authorized from using any classification of PIT on any Hilscher-Clarke work site. All equipment furnished by outside employees, subcontractors or vendors must meet the full scope and applicability of this policy and procedure.

Policy

Hilscher-Clarke is committed to provide a safe and healthful work environment for our entire staff and any subcontractors we may employ. In pursuit of this endeavor, the following Powered Industrial Truck policy and procedure is provided to eliminate or minimize the risk of injury in accordance with OSHA, Title 29 CFR (Code of Federal Regulations) 1910.178.

This policy and procedures is a key document to assist our firm in implementing and ensuring compliance with the standard, thereby protecting our employees, and in turn the general public. This Powered Industrial Truck policy includes, but is not limited to:

- Training and Licensing Requirements;
- Inspecting the Vehicle;
- Refueling/Recharging Guidelines;
- Safe Operating Procedures;
- Parking;
- Lifting Capacity & Procedures;
- The Stability Triangle;
- Slopes, Ramps & Other Hazards;
- Uploading Procedures; and
- Road Use of PIT's

All workers must comply with the requirements set forth in this document. Any deviation from these requirements will require direct written approval from the President or Safety Manager of Hilscher-Clarke.

Section II
General Program Management

Program Administration

The President shall be responsible for the following:

- Annual review and update of Hilscher-Clarke's Powered Industrial Truck Program to conform to current CFR standards.
- Insure compliance with standards set forth in this program and policies by periodic inspection of equipment and work sites.
- Ensuring that licensing requirements and standard operating procedures, described in this supplement, are included in specifications and contract documentation for work to be performed by subcontractors.
- Provide prompt assistance to the Safety Manager or Supervisor on any matter concerning this policy.
- The President may delegate the responsibility of various aspects of the Powered Industrial Truck policy and procedure to a Qualified Organization. However, the President's ultimate responsibility for his/her aspects of the program cannot be delegated.

Safety Manager shall be responsible for the following:

- Periodically and routinely inspects vehicles and vehicle operations.
- Analyze accidents involving PIT's as appropriate.
- Assists, when necessary, in selection and designation of jobs and/or job sites, which require the use of Powered Industrial Trucks.
- Coordinates with the Supervisor, training programs for use and operation of PIT's.
- Ensure that a qualified (according to the training outline of this policy and procedure) "designated and approved" (experienced and knowledgeable) PIT operator/instructor provides practical application training and performance evaluations to potential operators.
- Maintain training records of operator training and licensing.
- The Safety Manager may delegate the responsibility of various aspects of the Powered Industrial Truck policy and procedure to a Qualified Organization (as approved by the President). However, the Safety Manager's ultimate responsibility for his/her aspects of the program cannot be delegated.

Supervisor shall be responsible for the following:

- Select operators based on their experience and physical qualification.
- Assure that personnel, under their direct supervision, take the required training courses.
- Ensure that PIT operators under their direct supervision have a valid state issued driver's license and a valid Hilscher-Clarke operator's license.
- Monitor the performance of PIT operators to ensure they comply with safety rules.
- Ensure that unauthorized persons do not operate PIT's under their direct control.
- Monitor daily shift pre-operational inspections.
  - Maintain completed Pre-operational Inspection Checklists for a period of 30 days.
- Ensure that PIT's, which are out of compliance, are not operated.
- The Supervisor may delegate the responsibility of various aspects of the Powered Industrial Truck policy and procedure to a Qualified Organization (as approved by the Safety Manager). However, the Safety Manager's ultimate responsibility for his/her aspects of the program cannot be delegated.

Program Administration (cont.)

Operators shall be responsible for the following:

- Receive hands-on training and a performance evaluation from a "designated and approved" (experienced and knowledgeable) PIT operator/instructor.
- Has a valid State issued Driver's License and an Operator's Certification card. These documents must be in the possession of the license holder while operating PIT's on a Hilscher-Clarke worksite.
- Operates equipment safely and in accordance to operating instructions
- Wears appropriate protective equipment at all times.
- Conducts and documents daily pre-operational inspections, utilizing the Pre-operational Inspection Checklist in Appendix A and/or Appendix B.
- Reports any defects or malfunctions to site supervisory personnel immediately. Does not use a malfunctioning vehicle if the defect impairs the safe operation or use of the vehicle.
- Notifies their immediate supervisor if they are unfamiliar with or believe a load is not safe to lift, or if they believe an environment is not safe to enter.
- Informs their immediate supervisor of any safety-related problems involving PIT's or operations.

Definitions

Definitions

Accident Investigation – An investigation of an accident involving a PIT in order to determine the facts that caused or may have caused the accident and; recommendations for appropriate action to prevent a similar accident from occurring.

Attachments – Devices (other than conventional forks or load backrest extensions) for a specific use, mounted permanently or temporarily on the elevating mechanism of the PIT. Common types include fork extensions, clamps, booms, rams, baskets, and personnel platforms. These devices may be commercially available equipment, or equipment that has been fabricated onsite.

Capacity – Used to designate the weight-handling ability of a particular PIT as equipped.

Center of Gravity – The point on an object at which all of the object's weight is concentrated. For symmetrical loads, the center of gravity is at the middle of the load.

Certification – Certification requirements include successful training in the fundamentals and operation of the Powered Industrial Truck and; evaluation of sufficient skills for safe operation upon completion of Supervised Hands-On training. Both criteria must be met before qualification to operate the PIT without supervision. Documentation of the operator's training and evaluation dates, including the trainer's name, must be maintained in the operator's personnel file.

Counterweight – The weight that is built into the truck's basic structure and is used to offset the load's weight and to maximize the vehicle's resistance to tipping over.

Dockboard – A portable or fixed device for spanning the gap or compensating for the differences in the height between the loading platform and carrier.

Environment – Locations classified as hazardous or non-hazardous when considering the type of PIT required (See Table A-1 through A-4):

Table A-1. Hazard Classifications.

Classes	Unclassified	Class I Locations	Class II Locations	Class III Locations
Description of classes	**Locations not possessing environment described in other columns.**	**Locations in which flammable gases or vapors are (or may be) present in the air in quantities sufficient to produce explosive or ignitable mixtures.**	**Locations that are hazardous because of the presence of combustible dust.**	**Locations in which easily ignitable fibers are present, but are not likely to be in suspension in quantities sufficient to produce ignitable mixtures.**

Definitions (cont.)

Table A-2. Hazardous Atmospheres.

Group within classes	None*	A	B	C	D	E	F	G	None
Examples of locations or environment in classes and groups	Piers and wharves inside and outside, general storage, general industrial or commercial properties	Acetylene	Hydrogen	Ethyl Ether	Gasoline, Naphtha, Alcohol, Acetone, Lacquer, Solvent, and Benzene	Metal Dust	Carbon, black; coal and coal dust	Grain dust, flour dust, starch dust, and organic dust	Baled waste, cocoa fiber, cotton, excelsior, hemp, istle, jute, kapok, oakum, sisal, Spanish moss, and synthetic fibers

*** None - Not classified in other groups**

Table A-3. Divisions within Groups

		1	2	1	2	1	2
Divisions (nature of hazardous condition)	None	Above condition exists continuously, intermittently, or periodically under normal operating conditions.	Above condition may occur accidentally as due to a puncture of a storage drum.	Explosive mixture may be present under normal operating conditions, or where failure of equipment may cause the condition to exist simultaneously with arcing or sparking of electrical equipment, or where dusts of an electrically conducting nature may be present.	Explosive mixture not normally present, but where deposits of dust may cause heat rise in electrical equipment, or where such deposits may be ignited by arcs or sparks from electrical equipment.	Locations in which easily ignitable fibers or materials producing combustible flyings are handled, manufactured, or used.	Locations in which easily ignitable fibers are stored or handled (except in the process of manufacture).

Table A-4. Authorized uses of PITs by type in groups of classes and divisions.

Groups in Classes	None**	A	B	C	D	A	B	C	D	E	F	G	E	F	G	None	None
Type of PIT Authorized:																	
Diesel:																	
• **Type D**	**D***																
• **Type DS**									**DS**						**DS**		**DS**
• **Type DY**									**DY**						**DY**	**DY**	**DY**
Electric:																	
• **Type E**	**E***																**E**
• **Type ES**									**ES**						**ES**		**ES**
• **Type EE**									**EE**						**EE**	**EE**	**EE**
• **Type EX**					**EX**				**EX**		**EX**	**EX**			**EX**	**EX**	**EX**
Gasoline:																	
• **Type G**	**G***																
• **Type GS**									**GS**						**GS**		**GS**
Lp-Gas:																	
• **Type LP**	**LP***																
• **Type LPS**									**LPS**						**LPS**		**LPS**

*** PITs conforming to these types may also be used**

**** None - Not classified in other groups**

Forklift Truck – A self-loading PIT equipped with load carriage and forks for transporting and tiering loads.

Forks – Horizontal, tine-like projections, normally suspended from the carriage that engage and support loads.

Fulcrum – the truck's axis of rotation when it tips over.

Grade – the slope of a surface, which is usually measured as the number of feet of rise or fall over a hundred foot horizontal distance (the slope is expressed as a percent).

Definitions (cont.)

Lateral Stability – A truck's resistance to overturning sideways.

Line of Action – An imaginary vertical line through an object's center of gravity.

Load Center – The horizontal distance from the load's edge (or the fork's or other attachment's vertical face) to the line of action through the load's center of gravity.

Longitudinal Stability – The truck's resistance to overturning forward or rearward.

Moment – The product of the object's weight times the distance from a fixed point (usually the fulcrum). In the case of a powered industrial truck, the distance is measured from the point at which the truck will tip over to the object's line of action. The distance is always measured perpendicular to the line of action.

Operator – A trained and authorized person who controls any function(s) of a PIT.

Powered Industrial Truck – Any mobile power-propelled (i.e., electric or fuel) truck used to carry, push, pull, lift, stack or tier materials. PIT's can be ridden or controlled by a walking operator.

Tiering – The process of placing one load on or above another.

Track – The distance between the centerline of the vehicle's front and rear wheels.

Wheelbase – The distance between the centerline of the vehicle's front and rear wheels.

Qualification & Training

Qualification & Training

A key element of operator certification is the education and training received.

Operators must be trained and authorized by Hilscher-Clarke, as outlined in this policy and procedure, before operating powered industrial trucks on any Hilscher-Clarke controlled worksite. Training programs shall include safe operating practices, OSHA regulations, and a driving test. All new operators, regardless of previous experience, will be trained to Hilscher-Clarke's requirements.

Hilscher-Clarke's training will include, at a minimum, the following General topics:

▪ Operating instructions, warnings & precautions.	▪ Controls and instrumentation.
▪ Engine operation.	▪ Steering, maneuvering and visibility.
▪ Fork and attachment operation.	▪ Vehicle capacity and stability.
▪ Inspection and maintenance procedures.	▪ Refueling or charging of batteries.
▪ Operating Limitations.	▪ Composition of loads and load stability.
▪ Surface conditions where the vehicle will be operated.	▪ Differences between a powered industrial truck and an automobile.
▪ Load manipulation and stacking.	▪ Pedestrian traffic.
▪ Narrow aisles and ramps.	▪ OSHA regulations
▪ Hazardous locations and environments that could cause a buildup of carbon monoxide or exhaust fumes	▪ Any other operating instructions, warning, or precautions listed in the operator's manual for the type of vehicles they are being trained to operate.

…and the following Workplace-related topics:

▪ Surface conditions where the vehicle will be operated.	▪ Composition of loads to be carried and load stability
▪ Load manipulation, stacking, and unstacking.	▪ Pedestrian traffic in areas where the vehicle will be operated.
▪ Narrow aisles and other restricted places where the vehicle will be operated.	▪ Hazardous (classified) locations where the vehicle will be operated.
▪ Ramps and other sloped surfaces that could affect the vehicle's stability.	▪ Unique potentially hazardous environmental conditions in the workplace that could affect safe operation (i.e., overhead power lines).

To become a PIT operator and receive a PIT operator's license, candidates must successfully complete:

- **Formal Instruction:**
  - Video;
  - Lecture;
  - Question and answer session;
  - Posses a valid State Issued Driver's License;

Qualification & Training (cont.)

- **Formal Instruction (cont.):**
  - Oral and/or written tests shall be given by Hilscher-Clarke's "designated and approved" (experienced and knowledgeable) PIT operator/instructor, to measure the skill and knowledge of the operator in meeting the requirements of the Standard. Operators shall score 70% on the oral and/or written tests. (Records will be maintained by Hilscher-Clarke's Safety Manager); and all candidates must
  - Successfully satisfy the requirements in Appendix C (Operator Safety Guide Checklist).

- **Practical Application (Hands-On Training):**
  - Candidates shall successfully complete practical application (hands-on) training for equipment they operate in the workplace. The Company designated PIT operator/instructor shall administer this instruction according to the guidelines established by this policy and procedure.
  - The length of this required training varies, depending upon the level of skill, knowledge, and experience of the candidate.
  - After beginning training, the candidate has three (3) months to successfully complete the hands-on training and performance evaluation, prior to the issuance of a Hilscher-Clarke operator's license. If more than three (3) months elapses after beginning training, the candidate is required to retake the Formal Instruction and begin the process all over again. During the practical application (hands-on training) phase, the candidate may not operate a PIT unless he/she is working under the direct supervision and training of a Company designated PIT operator/instructor.

- **Performance Evaluation:**
  - Upon successful completion of the Formal and Hands-On training, the candidate is eligible for a performance evaluation by the Company designated PIT operator/ Instructor. This evaluation determines how safely the candidate operates PIT's in the workplace.
  - Upon successful completion of the performance evaluation, the Company designated PIT operator/instructor will forward the Powered Industrial Truck Operator Safety Guide Checklist (Appendix C) to the Safety Manager (or his designated representative). A license will then be issued for the appropriate PIT classification.

Class	Powered Industrial Truck Type
I	Electric Motor Rider Trucks
II	Electric Motor Narrow Aisle Trucks
III	Electric Motor Hand Trucks or Hand/Rider Trucks
IV	Internal Combustion Engine Trucks (Solid/Cushion Tires)
V	Internal Combustion Engine Trucks (Pneumatic Tires)
VI	Electric and Internal Combustion Engine Tractors
VII	Rough Terrain Lift Trucks

  -

- The license (see Appendix D) must be in the possession of the license holder while operating this equipment.
- If the PIT operator or his/her immediate supervisor wants to have additional equipment (i.e., newly purchased PIT's or other) added on an operator's license, a new Powered Industrial Truck Operator Safety Guide Checklist (Appendix C) must be completed and sent to the Safety Manager (or his/or her designated representative). This checklist should provide evidence that the operator has received training and has been evaluated on this new equipment by the Company designated PIT operator/instructor. After review, the operator's license will be updated accordingly.

- **Retraining and Enforcement**:
  - Appropriate retraining will be provided by a Company designated PIT operator/instructor when:
    - Driver operates the truck in an unsafe manner;
    - Driver is involved in an accident or near-miss incident;
    - Driver is assigned to drive a different type of powered industrial truck; or
    - Conditions in the workplace changes in a manner that could affect the safe operation of the truck.
  - Retraining in safety procedures and OSHA regulations will be conducted by a Company designated PIT operator/instructor every three (3) years.
  - An evaluation of driver performance will be conducted by a Company designated PIT operator/instructor every three (3) years.
  - Any operator failing any aspect of the retraining is required to retake the Formal Instruction and begin the process all over again.
  - Operators, regardless of status, who do not comply with Hilscher-Clarke's Powered Industrial Truck Policy and Procedure will be treated in accordance with Hilscher-Clarke's Disciplinary Action Procedures.

- **Training Records:**
  - A record of training and skill evaluations shall be kept on file and made available upon request. The Safety Manager is responsible for maintaining and archiving training records in accordance with Hilscher-Clarke's Powered Industrial Truck Policy and Procedures.

General Policies & Procedures

1.0 Mandatory Equipment

The use of safety and protective devices is an important factor in safe design and operation of PITs. The design of PITs shall comply with the appropriate American National Standards Institute (ANSI) B56 series standard.

1.0 All Powered Industrial Trucks, utilized on a Hilscher-Clarke worksite, must be minimally equipped with the following:

- **1.1** Legible namplate(s) and markings (i.e., capacity information, limitations).
- **1.2** Horns or other warning devices that are loud enough to be heard above other noises in the area. Flashing lights shall be placed on the overhead guard if noise is excessive. Forklifts should have automatic backup alarms.
- **1.3** Auxiliary lighting shall be provided on the truck in areas where general lighting is less than two lumens per square foot.
- **1.4** A load backrest extension shall be used whenever necessary to minimize the possibility of the load falling backwards. The load should not exceed the top of the backrest. Placing extra weight on the rear of the lift truck to counterbalance the front load **is not permitted**.
- **1.5** Trucks capable of lifting loads higher than the operator's head or where there is a hazard from falling objects, must be equipped with an overhead guard. The guard is not designed to protect the operator from a full capacity load.
- **1.6** Hazardous moving parts such as gears, chains, and sprockets shall be guarded.
- **1.7** Seat belts are required to be worn, if installed on the vehicle.
- **1.8** On-board, sealed fired extinguisher (ABC).
- **1.9** Additional equipment may be mandated for certain hazardous environments.

2.0 PIT Area of Use (Hazard Classification)

2.1 In addition to the classification (Class I through VII), PIT's are designated for use in different environments, depending on how they are powered and safeguarded to mitigate hazards caused by exhaust, fuel, and electrical systems. Table 5 illustrates the eleven (11) designations for PITs, which are divided according to their locations of use (non-hazardous and hazardous).

Table 5

Nonhazardous Locations	
Type	**Description**
D Trucks	Diesel powered units having minimum acceptable safeguards against inherent fire hazards.
E Trucks	Electrically powered units having minimum acceptable safeguards against inherent fire and electrical shock hazards.
G Trucks	Gasoline powered units having minimum acceptable safeguards against inherent fire hazards.
LP Trucks	Liquefied petroleum gas-powered units having minimum acceptable safeguards against inherent fire hazards.
Hazardous Locations	
Type	**Description**
DS Trucks	Diesel powered units that are provided with all the requirements for type D units and that have additional safeguards for the exhaust, fuel, and electrical systems.
DY Trucks	Diesel powered units that have all the safeguards of type DS units except that they do not have any electrical equipment, including ignition. These trucks are equipped with temperature limitation features.
ES Trucks	Electrically powered units that are provided with all the requirements for type E units and have additional safeguards for the electrical system to prevent emission of hazardous sparks and to limit surface temperatures.
EE Trucks	Electrically powered units that are provided with all the requirements for types E and ES units and have electrical motors and all other electrical equipment completely enclosed.
EX Trucks	Electrically powered units that differ from type E, ES, or EE units in that the electrical fittings and equipment are designed, constructed, and assembled so that the units may be used in atmospheres containing specifically named flammable vapors, dusts, and under certain conditions, fibers. Type EX units are specifically tested and classified for use in Class I, Group D or for Class II, Group G locations as defined in NFPA 70 (National Electrical Code).
GS Trucks	Gasoline powered units that, in addition to all the requirements for type G units, are provided with additional safeguards to the exhaust, fuel, and electrical systems.
LPS Trucks	Liquefied petroleum gas powered units that, in addition to the requirements for type LP units, are provided with additional safeguards for the exhaust, fuel, and electrical systems.
Durable markers indicating the designation of the type or PIT for use in hazardous areas shall be applied to each side of the vehicle in a visible but protected area. In addition, the works "Explosives Approved" shall be stenciled in plain view on all PITs approved for use with explosives.	

2.2 **Hazardous Area Signs**. The entrance to hazardous areas shall be clearly identified and posted with a sign identifying the type of PIT permitted, or the PIT shall be clearly marked indicating the area (s) it shall enter.

3.0 Pre-Operational Inspection

3.1 At the start of each work shift, during which the unit will be used, the operator on each work shift shall conduct a pre-operation inspection using the appropriate checklist in Appendix E-1 through E-2 (Operators Pre-Shift Inspection form). This inspection shall consist of a ***Visual Pre-Start Check*** *and an* ***Operations Pre-Use Check.***

3.1.1 If, during the same shift, a second operator wants to use a PIT but cannot verify that this inspection has been done, he/she shall complete the inspection prior to using the PIT.

3.1.2 Each PIT operator (or otherwise designated "Responsible Individual") shall maintain the completed record of inspection (Appendix E-1 through E-2) for a minimum of 30 days.

3.2 If any malfunctions or defects are found during the inspection, the PIT shall be parked (with the keys removed) and tagged "Out of Service" using the "Danger. Do Not Operate" tag pending repairs.

3.2.1 Hilscher-Clarke's ***On-Site Supervisory Personnel*** are to be notified immediately, by the operator, of any malfunctions or defects found during the pre-operational inspection.

3.3 During the Visual Pre-Start Check, the operator should inspect the PIT for:

- General condition and cleanliness.
- Floor – Clear of objects that could cause an accident.
- Overhead – No obstructions.
- Nearby objects to avoid as you drive away.
- Fire extinguisher – Present and charged.
- Engine oil level, fuel level, radiator water level (LPG, gas and diesel forklifts).
- Battery – Fully charged; check cables for exposed wires; battery plug connections not loose, worn or dirty; vent caps not clogged; electrolyte levels in cells; hold-downs or brackets keep battery securely in place.
- Bolts, nuts, guards, chains or hydraulic hose reels not damaged, missing or loose.
- Wheels and tires – Check for wear, damage, and air pressure, if pneumatic tires.
- Forks – Forks not bent; no cracks present; positioning latches in good working condition; carriage teeth not broken, chipped or worn.
- Chain anchor pins – not worn, loose or bent.
- Fluid leaks – No damp spots or drips.
- Hoses – Held securely; not loose, crimped, worn or rubbing.
- Horn – Working and loud enough to be heard in working environments; other warning devices operational.
- Lights – Head lights and warning lights operational.

3.4 During the Operational Pre-Use Check, the operator should inspect:

- Foot brake – Pedal holds, unit stops smoothly.
- Parking brake – Holds against slight acceleration.
- Deadman seat break – Holds when operator rises from seat.
- Clutch and gearshift – Shifts smoothly with no jumping or jerking.
- Dash control panel – All lights and gauges are operational.
- Steering – Moves smoothly.
- Lift mechanism – Operates smoothly (check by raising forks to maximum height then lowering forks completely.)
- Tilt mechanism – Moves smoothly, holds, (check by tilting mast all the way forward and backward).

3.0 Pre-Operational Inspection (cont.)

3.4 *During the Operational Pre-Use Check (cont.)*

- Cylinders and hoses – Not leaking after above checks.
- Listen for any unusual sounds or noises.
- Contamination of the control mechanisms by lubricants or other foreign matter.

4.0 Refueling / Recharging

4.1 Refuel only in designated "No Smoking" areas, away from flames, sparks and electrical arcs.

4.2 When changing propane (LPG) cylinders:

- Wear eye protection and leather gloves.
- Close the valve on the cylinder while the PIT's engine is running to consume all gas in the line.
- Shut off the engine.
- Open the connecting nut and inspect valves for leaking. **DO NOT use metal tools**.
- Disconnect the hose.
- Disconnect the holding straps.
- Remove the empty cylinder.
  - Put the cylinder down gently. Do not drop, dent, damage;
  - Always protect the valve from any damage;
  - Avoid contact with liquid propane, as it can cause frostbite;
  - Exchange removable cylinders outdoors or in well-ventilated areas; and
  - Store the cylinder outside, in an upright position, in an area where it can be secured and will be protected from being struck.
- Replace the full cylinder in the proper position.
- Connect the holding straps.
- Tighten the connecting nut (wiggle hose).
- Open the valve on the cylinder slowly and check for leaks. Use solution of soap and water or a leak detector to check – ***Smell – Listen – Look***.
- If the valve leaks:
  - 1st time – Tighten the nut and continue;
  - 2nd time – Change the cylinder;
  - 3rd time – Change the hose.
- Open the valve fully (slowly).
- Check that the hose is turned inward.
- Secure the hose downward.
- Secure the cylinder.
- Start the engine and resume operation.
- Never mount more than two LPG cylinders on any forklift truck.

4.3 When changing batteries:

- Check the electrolyte level before recharging. If the battery has been outside in cold weather, make sure that the battery is not frozen before recharging it.
- If the electrolyte is covering the top of the plates, co not add more water. Recheck the fluid level after the battery has been recharged. If water is added, use distilled water, not tap water.
- When vent plugs may need adjustment, follow manufacturers' instructions carefully.
- If the battery has sealed vents, do not recharge the battery with a current greater than 25 amps.
- To reduce the possibility of explosions, follow the recommendations of the recharger manufacturer for attaching and removing cables and for operating the equipment properly. Generally, this includes unplugging or turning off the charger before connecting or disconnecting the clamp connections. Carefully attach the clamps to the battery with the proper polarity [positive (+) clamp, usually red, to the positive terminal and negative (-) clamp, usually black, to the negative terminal].

4.4 When changing batteries (cont.):

- Ensure that the area is ventilated when the batteries are being charged.
  - Charge batteries only in approved, ventilated battery-charging areas. The charging of lead-acid batteries can be hazardous. When batteries are being recharged, they generate hydrogen gas that is explosive in certain concentrations in air (the flammability or explosive limits are 4.1% to 72% hydrogen in air). The spark retarding vents help slow the rate of release of hydrogen, but the escaping hydrogen may form an explosive atmosphere around the battery if ventilation is poor. The ventilation system should be designed to provide an adequate amount of fresh air for the number of batteries being charged. This is essential to prevent an explosion.
- If the battery becomes hot or if the electrolyte spits out from the vent, turn off the recharger temporarily. Resume recharging using a lower current or charging rate.
- Install a safety shower and an eyewash station. Non-plumbed or portable eye wash fountains and safety showers (which meet current ANSI standards) in the battery – charging area must meet the performance and access requirements in ANSI Z358.1-1990 (or latest version). Hand held eyewash bottles ***do not*** take the place of a portable eyewash station.

5.0 Maintenance & Modifications

5.1 A truck in need of repair, or in any way unsafe, shall be taken out of service until it has been restored to a safe operating condition.

5.2 Only trained and authorized personnel shall maintain and/or repair PIT's. All work shall be done in accordance with the manufacturer's specifications.

5.3 **Modifications** of additions to PIT's that affect their capacity or safe operation shall not be made without prior written approval from the manufacturer.

5.3.1 Capacity, operation, and maintenance instruction plates, tags, or decals shall be changed accordingly.

6.0 Hazardous Atmospheres

6.1 When fuel powered trucks are used in enclosed areas, concentrations of carbon monoxide and other hazardous gases shall not exceed OSHA permissible exposure limits.

6.1.1 To prevent a build up of dangerous concentrations of carbon monoxide, drivers will not allow fuel powered trucks to idle for long periods in enclosed areas.

6.2 Only approved trucks shall be used in locations containing hazardous atmospheres such as flammable vapors, dusts, and easily ignitable fibers.

7.0 Safe Operating Procedures

7.1 Use a "three point mount" to enter and exit the PIT by always keeping at least two hands and one foot or two feet and one hand in contact with the PIT at all times.

7.2 Use seat belts where provided.

7.3 Operate internal combustion engine PIT's only in designated areas with adequate ventilation.

7.4 Do not exceed the floor road rating.

7.4.1 The total weight of the PIT equals the PIT's plus the load and any attachments.

7.5 Secure (tie down) unstable loads before starting the vehicle.

7.6 Keep arms and legs inside the PIT structure, except when signaling for turns or stops.

7.7 Do not jump from a moving PIT.

7.8 Make sure that there is adequate clearance before passing under or between structures.

7.9 Yield to all pedestrians.

7.10 Observe all traffic signals.

7.11 Do not use a PIT to tow or push other PIT's, another vehicle or other equipment unless it is specifically designed to do so.

7.12 Never exceed the PIT's rated capacity.

7.13 Do not lift material or equipment with which you are unfamiliar.

7.14 Maintain at least a 10 foot separation from overhead power lines.

7.15 PIT's shall not be driven up to anyone standing in front of a fixed object.

7.16 No person shall stand or pass under the elevated portion of a truck, whether loaded or empty.

7.17 PIT's shall only be used for the purpose for which the PIT is designed. PIT's should not be used to bump skids, push piles, move other trucks, or used as a hoist.

7.18 Do not leave an unattended PIT running. A PIT is considered unattended if the operator is out of sight of the PIT or more than 25 feet away.

7.19 When traveling on streets or roads, use only PITs that have been recommended by the manufacturer for actual road use.

7.20 Use Class VII PITs for irregular or rough terrain.

7.21 Solid tire PITs (such as Class IV PIT) should be used indoors only. Solid tire PITs are not designed to operate on irregular surfaces or rough roads.

7.22 When crossing rails or other irregular areas, slow down and approach on a diagonal.

8.0 Loading

8.1 Only stable or safely arranged loads shall be handled and caution must be exercised when handling off-center loads.

- **8.1.1** Objects should be neatly piled.
- **8.1.2** Irregularly shaped objects should be loaded so they cannot roll or fall off.
- **8.1.3** Heavy objects should be placed with the weight as low as possible.
- **8.1.4** Never add a counterweight if the load appears too heavy.
- **8.1.5** Round objects should be blocked or tied so they cannot roll.
- **8.1.6** Loading will not be done to a height that blocks the view of the operator, or makes it likely that the load may fall.

8.2 Place tines as wide as possible for the load and lock them in place to prevent sideways movement.

8.3 Forks should be placed under the load as far as possible and the mast carefully tilted backward to stabilize the load.

8.4 Operators must never operate a PIT with an overload. The rated capacity should be marked on the PIT.

8.5 Loads are not to be raised or lowered while the PIT is en route.

8.6 Extreme care must be used when tilting the load forward or backward. Tilting forward with forks elevated is not permitted except to pick up a load.

- **8.6.1** Elevated loads must be tilted forward unless the load is in a deposit position over a rack or stack.
- **8.6.2** When stacking or tiering, only enough backward tilt to stabilize the load shall be used.

8.7 If standard forks must be used to pick up round objects (i.e., drums), care must be used to ensure that the tips do not puncture the object or push it into other workers.

8.8 ***For specific procedures and guidelines for loading and unloading vehicles (i.e., railroad cars, straight trucks, tractor-trailers and elevators) see section 11.0 of this policy.***

9.0 Traveling

9.1 Reckless or careless driving will not be tolerated, under any circumstance. Reckless or careless drivers will have their driving privileges revoked and be required to go through the retraining guidelines as outlined in the "Qualification and Training" section of this policy and procedure.

9.2 Operators shall maintain an indoor speed under 5 mph, and an outdoor speed under 15 mph.

9.3 If the load obstructs the operator's forward view, the operator shall travel with the load trailing.

9.4 Operators shall always look in the direction of travel.

9.5 Safe distances must be maintained. Approximately 3 truck lengths from the vehicle ahead must be maintained.

9.4.1 Other PIT's traveling in the same direction must not be passed at intersections, blind spots, or other dangerous locations.

9.6 Drivers are required to slow down and sound horns at cross aisles and other locations where vision is obstructed. The operator should lightly tap the horn to warn pedestrians when approaching from behind.

9.7 Grades must be ascended or descended slowly. Loaded trucks must be driven with the load upgrade when ascending or descending grades in excess of 10%. On all grades, forks shall be tilted back and raised only as far as necessary to clear the road surface. Low gear or the slowest speed should be used when descending a grade.

9.8 Under all travel conditions, forklifts must be operated at a speed that will permit it to be brought to a stop in a safe manner.

9.8.1 The operator shall slow down for wet or slippery floors.

9.8.2 Never run over loose objects on the roadway surface.

9.9 Dockboards or bridgeplates are to be driven over carefully and slowly and only after they have been properly secured. Never exceed their rated weight capacity.

9.10 Elevators should be approached slowly. Check to make sure the weight of the PIT, load, and driver do not exceed the capacity of the elevator. Once on the elevator, the controls should be put in neutral, the brakes set, and the engine shut off.

9.11 While negotiating turns, speed must be reduced to a safe level by turning the steering wheel in a smooth, sweeping motion.

9.11.1 Except when maneuvering at a very low speed, the steering wheel shall be turned at a moderate, even rate.

9.12 Operators should not make quick starts, jerky stops, or turns at excessive speeds. Extreme caution should be used on turns, ramps, grades, or inclines.

9.12.1 A safe distance shall be maintained from the edges of elevated ramps or platforms.

9.13 The operator should be particularly careful to avoid striking overhead objects such as lights, conduits, and sprinkler heads.

9.13 Loads should not be raised or lowered while traveling.

9.14 Forks should be carried as low as possible whether loaded or empty.

9.15 Unauthorized personnel shall not ride on PITs. It is the responsibility of the operator to keep unauthorized individuals off the PIT.

9.15.1 Passengers may only be transported on a PIT when a manufacturer approved seat is provided.

9.16 When operating in close quarters, hands must be placed where they cannot be pinched between steering controls and projecting stationary objects. Legs and feet must be kept inside the guard or the operating stations of the truck.

10.0 Parking

10.1 PITs shall only be parked in designated areas – never in an aisle or doorway, or obstructing equipment or material.

10.2 When a truck is left unattended, forks shall be fully lowered, controls put in neutral, power shut off, key removed, and the brakes set.

10.2.1 Unattended means the operator is greater than 25 feet from the vehicle, or the vehicle is not in view, regardless of the distance.

10.3 Wheels shall be blocked if the PIT is parked on an incline.

10.4 When the operator is dismounted and within 25 feet of the PIT (still in his/her view), the forks shall be fully lowered, controls neutralized and the brakes set.

10.5 Fire aisles, access to stairways, doorways, and fire equipment shall be kept clear.

11.0 Loading & Unloading Vehicles

PITs provide efficient loading and unloading of straight trucks, tractor-trailers, railway cars and elevators.

All loading and unloading operations, when practical, will consist of a team of 2 employees (i.e., equipment operator and spotter).

11.1 Preparing the work area for using a powered industrial vehicle for loading/unloading:

11.1.1 The PIT operator should check to be sure the "driver" has:

- Set the vehicle's brakes up;
- Chocked the vehicles wheels; and
- Installed fixed jacks to support a semi-trailer that is not coupled to a tractor to prevent it from upending.

11.1.2 While railroad cars are on a sidetrack, for loading or unloading, the wheels at both ends shall be blocked on the rails.

11.1.3 Check that the height of the vehicle's entrance door clears the forklift height by at least 2 inches.

11.1.4 Make sure floors/working surfaces can support the combined weight of the forklift and the load.

11.1.5 Inspect interior of a vehicle (i.e., railcar, semi-trailer for the following: trash, loose objects and obstructions; holes or weak floors; poor lighting; and overhead clearance.

11.1.6 Install anti-slipping material in any area that could be a hazard because of weather conditions.

11.1.7 Ensure that docks and dock plates are clear of obstructions and not oily or wet.

- Wheel stops or other recognized positive protection (i.e., hand brakes or rail clamping chocks) must be provided to prevent railroad cars from moving during loading and unloading operations.
- Positive protection (i.e., derail and/or bumper blocks) must also be provided to prevent railroad cars from being moved, or bumped by other rail cars, while dockboards or bridge plates are in position.

11.2 Using a PIT to open and close freight doors.

11.2.1 A PIT may be used to open and close freight doors if the freight car doors are equipped with a device specifically designed for that purpose.

11.2.2 The device must apply force in a direction parallel with the door travel.

11.2.3 Only licensed operators specifically trained in the safe operation of this equipment may utilize a powered industrial truck to open and/or close freight doors.

11.2.4 When utilizing this device the operator must keep the operation in full view, and other employees must be kept clear (i.e., utilization of caution tape around work area, spotters, etc.) while the door is being moved.

11.2.5 Railcar doors must be opened slightly before being opened fully to alert workers to shifted loads.

11.2.6 Jammed doors must only be opened by railcar door openers or PIT's equipped with door opening devices.

11.3 Loading/Unloading vehicles using a forklift truck.

11.3.1 Keep forks pointed downhill when traveling without a load on a ramp.

11.3.2 Keep forks point uphill when traveling with a load on a ramp.

11.3.3 Stay clear of edges of docks, rail cars, or ramps. Have edges clearly marked.

11.3.4 Do not tow or push railway cars or trucks with a forklift.

11.3.5 Do not operator forklifts inside vehicles for long periods without ventilation.

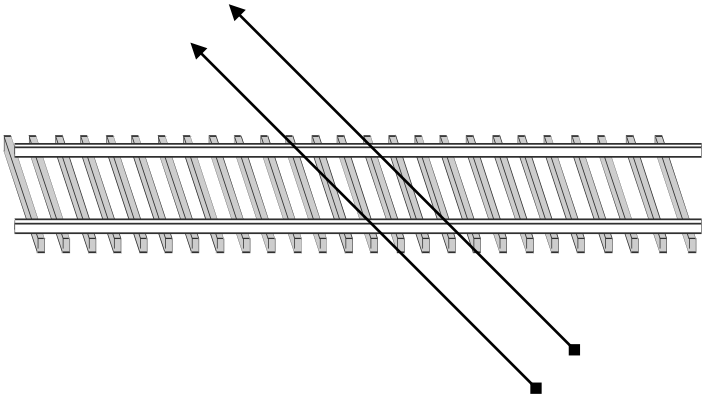
11.3.6 Make sure that the dock plate is properly secured and can support the load before driving over it.

- Load weight should be clearly marked. If it is not consult immediately with your Supervisor. Do not attempt to drive over the dock plate until specific load weight is established and confirmed.

11.3.7 Drive carefully and slowly over the plate. Do not spin wheels.

11.4 When loading railway cars it is important to…

11.4.1 Cross railway track on a diagonal.



11.4.2 Set handbrakes, wheel blocks and derailer before entering a railway car.

- If another person performs this task, confirm that these steps have been performed.

11.4.3 Do not open railway car doors with forklift forks (see section11.2).

11.5 Using a PIT in an elevator.

11.5.1 Do not enter any elevator unless specifically authorized to do so.

11.5.2 Before entering any elevator, ensure that the forklift plus load weight does not exceed the elevator capacity.

11.5.3 Approach the elevator slowly, stop at a safe distance from the elevator gate and enter squarely.

11.5.4 Neutralize the forklift controls, shut off the motor, and apply the brakes.

12.0 Lifting Capacity & Lifting Procedures

12.1 PIT's have special handling requirements. One reason for this is their tremendous lifting capacity. The counter balance weight in the back of a PIT prevents the PIT from tipping over when you lift a load. As the load's center of gravity moves further away from the mast, the PIT's lifting capacity will be reduced.

12.1.1 Check the PITs nameplate to see what its lifting capacity is. Always use a forklift that is rated to handle the weight of the load you want to move.