**The Pennsylvania State University**

**Powered Industrial Truck Program**

**Introduction:**

Powered industrial trucks (PIT) pose a serious safety hazard if not used properly. It is the policy of the Pennsylvania State University (PSU) to train employees on the hazards of operating powered industrial trucks and ensure that such equipment is safely maintained.

**Purpose:**

This program has been established to:

* Ensure the safe operation of powered industrial trucks.
* Ensure that work units understand and comply with safety standards related to powered industrial trucks.

## Assign responsibilities to personnel which are necessary for successful implementation.

**Scope & Applicability:**

## This program applies to all employees at all PSU locations except the Hershey Medical Center and the College of Medicine.

## 

This program applies to the following equipment (see Appendix B for specific examples):

Class I – Electric Motor Rider Trucks

Class II –Electrical Motor Narrow Aisle Trucks

Class III – Electric Motor Hand or Hand/Rider Trucks

Class IV – Internal Combustion Engine Trucks – Cushion (solid) Tires

Class V - Internal Combustion Engine Trucks – Pneumatic Tires

Class VI – Electric & Internal Combustion Engine Tractors

Class VII – Rough Terrain Forklift Trucks

This program does not apply to the following equipment:

* Farm vehicles and vehicles intended primarily for earth moving or over-the-road hauling.
* Segways, golf carts, gators, quads and other similar types of rough terrain vehicles.
* Aerial lifts and scissor lifts. Refer to Aerial/Scissor Lift Program.

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1. **References**

(The following have been used as references in the development of this program)

* Pennsylvania State University Personal Protective Equipment Program
* Pennsylvania State University Fall Protection Program
* OSHA Powered Industrial Truck Standard – 29 CFR 1910.178
* OSHA Storage and Handling of Liquefied Petroleum Gases. – 29 CFR 1910.110
* ANSI Safety Standard for Low Lift and High Lift Trucks – B56.1

1. **Responsibilities**
   1. **Budget Executives and Budget Administrators:**
      * + Ensure that responsibilities assigned within this program are carried out within their administrative work unit.

* Designate individuals responsible for the implementation of this program within their work unit.
* Actively support this program as part of the work unit’s overall safety effort.
  + - * Ensure adequate funding is available to support this program.
  1. **Department of Environmental Health and Safety:**
* Assist work units in implementing the provisions of this program.
* Approve PIT trainers.
* Periodically review and update this written program.
  + - Periodically evaluate the overall effectiveness of this program.
  1. **Safety Officers:**
* Determine the applicability of this program to activities conducted within their work unit.
* Coordinate implementation of this program within their work unit.
* Actively support this program as part of the work unit’s overall safety effort.
  1. **Supervisors:**
* Be thoroughly informed of the contents of this program and its application to their areas of responsibility and authority.
* Ensure employees comply with all provisions of this program.
* Ensure employees receive training appropriate to their assigned tasks and maintain documentation of such training.
* Ensure employees are provided with and use appropriate protective equipment.
* Take prompt corrective action when unsafe conditions or practices are observed.
  + - Investigate injuries and incidents within their work unit related to powered industrial truck usage.
  1. **Employees:**
* Follow the work practices described in this program, including the use of appropriate protective equipment.
* Attend all training required by this program.
* Immediately report any unsafe conditions or concerns related to powered industrial truck safety to their supervisor.

1. **Definitions**

**Authorized Person** (Repair): Someone with training and experience on the brands/models being serviced. There are specific safety considerations that are unique to forklift trucks, thus the training must be specific to the brands/models being serviced.

**Certified Operator**: Certification of a PIT operator at PSU is a three-step process consisting of classroom instruction, hands-on training and hands-on evaluation*.* Once the employee has successfully completed all three steps they are considered to be a certified operator.

**Competent Trainer**: An employee who has successfully completed a Train–the–Trainer or equivalent type of training program and is familiar with the type of PIT in their work unit. A contractor or equipment vendor who has experience training PIT safety and operation and is familiar with the equipment is also permitted to be a Competent Trainer.

**Competent Evaluator** (Hands-on): An employee in the department/work unit who is experienced and competent with the PIT. An employee must be familiar with the equipment and its safe operation. In order to be considered competent in regards to conducting the evaluation portion of the PIT training, an employee must have successfully completed the classroom portion of PIT training. This employee could be but is not limited to a certified operator, supervisor/manager or safety officer.

**Fixed Jacks** – Devices which hold one end of a trailer to avoid the possibility of the trailer being "up-ended" in the course of PIT operations. The word "fixed" indicates that such jacks are not temporary in nature but are an integral part of the trailer frame. They are folded up and under the trailer after loading or unloading activities have been completed and the trailer is reattached to its tractor.

**Powered Industrial Truck** – Vehicles which are commonly called “forklifts” or “lift trucks” and are used primarily to move materials. They can be used to move, raise, lower, or remove large objects or a number of smaller objects on pallets or in boxes, crates, or other containers. Powered industrial trucks can be ridden or controlled by a walking operator. Earth moving and over the road haulage trucks are not included in this definition.

1. **General Requirements**
2. Operators shall review and follow the manufacturer’s operating manual. A copy of the manual must be located on the equipment.
3. Only certified operators shall operate a PIT.
4. Operators shall follow safe work practices when operating a PIT, a list of common safe work practices are summarized in Appendix F.
5. If a PIT is not equipped with a seatbelt the work unit must contact the manufacturer or forklift repair vendor to determine if a seatbelt can be retrofitted onto that PIT. If a PIT can be retrofitted with a seatbelt, it must be installed. If a seatbelt cannot be retrofitted, then the work unit must keep the documentation from the manufacturer.
6. **Pre-Use Inspections**
7. Every PIT must undergo a pre-use inspection prior to use on each shift.
8. PITs not used during a shift do not have to undergo an inspection during that shift.
9. Pre-use inspections must be documented using an appropriate checklist for the PIT similar to the one in Appendix A. Refer to the manufacturer's inspection requirements for complete inspection details.
10. The pre-use inspection will identify conditions that could affect the safe use of the PIT. If any unsafe conditions exist, the PIT shall be removed from service. In order to remove a PIT from service, the operator shall remove the keys and place an “Out of Service” tag on the steering wheel.
11. Operators must immediately report any unsafe PIT conditions to their supervisor. When a PIT has been removed from service, the operator must give the keys to the supervisor for safekeeping. The supervisor is then responsible for ensuring the necessary arrangements are made for repair.
12. Only authorized personnel shall perform PIT repairs and adjustments. All replacement parts shall be the same design as the original or an equivalent design as designated by the manufacturer.
13. **Battery Charging, Filling and Fueling:**
14. Charging Batteries
15. Charging is permitted only in designated areas.
    * 1. Warning signs shall be posted at battery charging locations that state “Caution-battery charging station, No Smoking or Open Flames” (or equivalent).
16. Adequate ventilation must be available to avoid the build-up of hydrogen gas during battery charging.
17. A 10 lb ABC fire extinguisher must be located within 20 feet.
18. A means to protect charging apparatus from damage from trucks must be provided.
19. Filling Batteries
20. When filling batteries with water, the following personal protective equipment (PPE) at a minimum must be worn: Safety goggles or face shield w/ safety glasses, acid resistant gloves and acid resistant apron.
21. A properly equipped battery filling station shall have:
22. An eyewash able to provide a 15 minute flow. The eyewash shall be located within 10 seconds walking distance of all battery filling areas.

6.2.3 A phone or other means of communication in the event of an emergency.

* 1. Fueling (Liquid Petroleum, Gasoline, Diesel, etc)

1. Signs shall be posted at fueling locations that state: “Danger – Propane, No Smoking or Open Flames” (or equivalent).
2. Liquid petroleum (LP) cylinders shall only be stored outside in a secured and protected designated rack or storage area.
3. When removing and attaching the connection to the LP cylinder the following PPE at a minimum must be worn: Safety glasses and work gloves (leather or equivalent).
4. LP cylinders shall be secured to the forklift before operating.
5. LP cylinder connections shall be checked for leaks by sounds or smell of escaping gas.
6. **Training and Evaluation**
   1. Training must be completed prior to any use of the PIT. Certification of a PIT operator at PSU is a three-step process consisting of classroom instruction, hands-on training and hands-on evaluation*.*
   2. Classroom instruction, hands-on training and hands-on evaluation can be conducted by either a competent trainer in the work unit, equipment manufacturer, safety consultant and/or a vendor who specializes in PIT training.
      1. Hands-on training and hands-on evaluations can also be conducted by an employee in the department/work unit who is experienced and competent with the PIT. This person could be a certified PIT operator, supervisor/manager or safety officer.
      2. EHS must approve trainers.
   3. Training must be specific to the class of PIT being used (i.e. forklift, order picker, pallet truck, etc).
   4. PIT training must cover the following truck-related topics:
      * Operating instructions, warnings, and precautions for the class of truck in question.
      * Differences in handling between PITs and automobiles.
      * Truck controls and instrumentation (where they are located, what they do, and how they work).
      * Engine or motor operation.
      * Steering and maneuvering.
      * Visibility (including restrictions due to loading).
      * Fork and attachment adaptation, operation, and use limitations.
      * Vehicle capacity.
      * Vehicle stability.
      * Pre-use inspection procedures.
      * Refueling and/or changing of batteries.
      * Operating limitations.
      * Fall protection (if applicable) (e.g., stand up order pickers).
      * Proper attachment and use of any worker platform that may be utilized with the work unit’s PIT.
   5. PIT training must cover the following workplace-related topics:
      * Surface conditions where the PIT will be operated.
      * Composition of loads to be carried and load stability.
      * Load manipulation, stacking, and unstacking.
      * Pedestrian traffic in areas where the PIT will be operated.
      * Narrow aisles and other restricted places where the PIT will be operated.
      * Ramps and other sloped surfaces that could affect the stability of the PIT.
      * Closed environments and other areas where insufficient ventilation or poor vehicle maintenance could cause a buildup of carbon monoxide or diesel exhaust.
      * Any other unique or potentially hazardous environmental conditions in the workplace that could affect safe operation of the PIT.
   6. Employees shall not be allowed to operate rented equipment unless they have been previously certified on similar equipment. Operators are also required to review the owner’s manual and shall be given ample time to become familiar with the equipment and its controls before operation is permitted. The vendor is required to review equipment with the user when the user is not familiar with the type of PIT.
   7. Trainees must successfully complete hands-on training and a hands-on evaluation before being allowed to operate a PIT independently. Trainees must be given adequate supervision and time to learn basic operating skills.
   8. Initial operator evaluations must be completed using the checklist found in Appendix D or equivalent.
   9. Documented re-evaluation of each PIT operator will be completed at least once every three years using Appendix D or equivalent.
      1. Re-evaluations can be conducted by an employee in the department/work unit who is experienced and competent with the PIT. This person could be an certified PIT operator, Supervisor/Manager or safety officer.
   10. Refresher training in relevant topics will be provided to a PIT operator when any of the following occur:
       * The operator has been observed to be using the PIT in an unsafe manner.
       * The operator has been involved in an accident or a near-miss incident.
       * The operator has received an evaluation that reveals the operator is not using the PIT safely.
       * The operator is assigned to operate a different class of PIT.
       * A condition in the workplace changes in a manner that could affect safe operation of the PIT.
7. **Maintenance:**
   1. The manufacturer’s instructions regarding maintenance must be followed. (Such instructions are typically included in the owner’s manual for the PIT).
   2. An annual inspection is required and must be conducted by an authorized person qualified as a mechanic on the type of PIT or one having similar design characteristics.
   3. Any PIT with an identified safety issue must be immediately removed from service.
   4. Maintenance performed by PIT operators is limited to replacing/ disconnecting/connecting batteries, changing fuel cylinders, adding water to batteries, replacing light bulbs and replacing stickers and decals.
   5. No PIT with a leak in the fuel system may be operated until the leak has been eliminated. Repairs to the fuel and ignition system that involve fire hazards will be conducted in a location (non-flammable) designated for such repairs.
   6. Any PIT that emits hazardous sparks or flames from the exhaust system must be immediately removed from service and not returned to service until the cause has been eliminated.
   7. Only replacement parts equivalent to the original parts are to be used.
8. **Recordkeeping**
   1. Each work unit is responsible for maintaining the following records in order to meet the requirements of this program:

* + 1. A listing of all powered industrial trucks within the work unit.
    2. Records of all PIT training provided to employees within the work unit including training rosters and evaluation forms. Use Appendix C or equivalent to record the following information:
       1. Name of the operator,
       2. Date of the classroom training,
       3. Date of the hands-on training,
       4. Date of the hands-on evaluation,
       5. Identity of the person(s) performing the training or evaluation,
       6. Make and model of PIT
    3. Copies of all pre-use inspection forms for one year after completion.
    4. Copies of annual inspection records for at least four years.
    5. Copies of repair records for at least four years.
  1. EHS is responsible for maintaining the following records in order to meet the requirements of this program:
     1. EHS will retain training records for training they have provided indefinitely.

1. **Contractors**

Contractors are required to follow all applicable OSHA powered industrial truck regulations and manufacturer’s instructions. Contractors are not permitted to use PSU owned PITs.

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| **Appendix A**  **POWERED INDUSTRIAL TRUCK PRE-USE CHECKLIST** | | | | | | | | | |
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| Department: | | | | Lift Truck Make: | | | | | |
|  | | | | Lift Truck Serial Number: | | | | | |
|  |  |  |  | |  |  |  |  |  |
| **Directions:** |  |  |  | |  |  |  |  |  |
| (1) Form is to be completed by first employee to operate lift truck on each shift. | | | | | | |  |  |  |
| (2) Explain any unsafe conditions in the "Comments" section. | | | | | | |  |  |  |
| (3) If any unsafe conditions exist, the lift truck must be removed from service. Place a "Out of Service” tag or equivalent on the steering wheel and give the keys to the supervisor. | | | | | | | | | |
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| **VISUAL INSPECTION:** | | | | |  | **OPERATIONAL INSPECTION:** | | | |
| Tires/Wheels | | |  | |  | Steering | | |  |
| Head/Tail/Working Lights | | |  | |  | Service Brake | | |  |
| Warning Decals & Data Plate | | |  | |  | Parking Brake | | |  |
| Overhead Guard & Mirrors | | |  | |  | Horn | | |  |
| Forks/Load Engaging Mechanism | | |  | |  | Backup Alarm | | |  |
| Load Back Rest | | |  | |  | Lifting/Lowering | | |  |
| Engine Oil | | |  | |  | Tilting | | |  |
| Hydraulic Oil | | |  | |  | Attachments | | |  |
| Fuel | | |  | |  | Control Levers | | |  |
| Battery | | |  | |  | Gauges/Instruments | | |  |
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| **Comments:** |  |  |  | |  |  |  |  |  |
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**Month: \_\_\_\_\_\_ Year: \_\_**

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| **Date** | **1** | **2** | **3** | **4** | **5** | **6** | **7** | **8** | **9** |
| **Initial** |  |  |  |  |  |  |  |  |  |
| **Date** | **10** | **11** | **12** | **13** | **14** | **15** | **16** | **17** | **18** |
| **Initial** |  |  |  |  |  |  |  |  |  |
| **Date** | **19** | **20** | **21** | **22** | **23** | **24** | **25** | **26** | **27** |
| **Initial** |  |  |  |  |  |  |  |  |  |
| **Date** | **28** | **29** | **30** | **31** |  |  |  |  |  |
| **Initial** |  |  |  |  |  |  |  |  |  |

**Appendix B**

**Classes of Powered Industrial Trucks**

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| |  | | --- | | **Class I: Electric Motor Rider Trucks** | |
| |  |  |  | | --- | --- | --- | | The following are examples of Class I powered industrial trucks. | | | | **Lift Code 1: Counterbalanced Rider Type, Stand Up.** | **Lift Code 4: Three Wheel Electric Trucks, Sit Down.** | **Lift Code 5: Counterbalanced Rider, Cushion Tires, Sit Down.** | | **Lift Code 6: Counterbalanced Rider, Pneumatic or Either Type Tire, Sit Down.** |  |  | |

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| |  | | --- | | **Class II: Electric Motor Narrow Aisle Trucks** | |
| |  |  |  | | --- | --- | --- | | The following are examples of Class II powered industrial trucks. | | | | **Lift Code 1: High Lift Straddle.** | **Lift Code 2: Order Picker.** | **Lift Code 3: Reach Type Outrigger.** | | **Lift Code 4: Side Loaders: Platforms.** | **Lift Code 4: Side Loaders: High Lift Pallet.** | **Lift Code 4: Turret Trucks.** | | **Lift Code 6: Low Lift Platform.** | **Lift Code 6: Low Lift Pallet.** |  | |

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| |  | | --- | | **Class III: Electric Motor Hand Trucks or Hand/Rider Trucks** | |
| |  |  |  | | --- | --- | --- | | The following are examples of Class III powered industrial trucks. | | | | **Lift Code 1: Low Lift Platform.** | **Lift Code 2: Low Lift Walkie Pallet.** | **Lift Code 3: Tractors** | | **Lift Code 4: Low Lift Walkie/Center Control.** | **Lift Code 5: Reach Type Outrigger.** | **Lift Code 6: High Lift Straddle.** | | **Lift Code 6: Single Face Pallet.** | **Lift Code 6: High Lift Platform.** | **Lift Code 7: High Lift Counterbalanced.** | | **Lift Code 8: Low Lift Walkie/Rider  Pallet and End Control.** |  |  | |

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| |  | | --- | | **Class IV: Internal Combustion Engine Trucks (Solid/Cushion Tires)** | |
| |  |  |  | | --- | --- | --- | | The following are examples of Class IV powered industrial trucks. | | | | **Lift Code 3: Fork, Counterbalanced (Cushion Tire).** |  |  | |

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| |  | | --- | | **Class V: Internal Combustion Engine Trucks (Pneumatic Tires)** | |
| |  |  |  | | --- | --- | --- | | The following are examples of Class V powered industrial trucks. | | | | **Lift Code 4: Fork, Counterbalanced (Pneumatic Tire).** |  |  | |

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| |  | | --- | | **Class VI: Electric and Internal Combustion Engine Tractors** | |
| |  |  |  | | --- | --- | --- | | The following are examples of Class VI powered industrial trucks. | | | | **Lift Code 1: Sit-Down Rider  (Draw Bar Pull Over 999 lbs.).** |  |  | |

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| |  | | --- | | **Class VII: Rough Terrain Forklift Trucks** | |
| |  |  | | --- | --- | | Class VII – Rough terrain forklift is a generic term used to describe forklifts typically intended for use on unimproved natural terrain and disturbed terrain construction sites. However, the term “rough terrain” does not imply that the forklift can be safely operated on every conceivable type of terrain.  There are three basic types of rough terrain forklift: | | | **Vertical mast type.** | This is an example of a ruggedly constructed forklift and is designed to be used primarily outdoors. | | **Variable reach type.** | This is an example of a vehicle equipped with a telescoping boom, which enables it to pick and place loads at various distances and lift heights in front of the machine. The ability to reach out in front of the forklift allows the operator flexibility in the placement of a load. | | **Truck/trailer mounted.** | This is an example of a portable self-propelled rough terrain forklift that is typically transported to the job site. It is mounted on a carrier to the back of a truck/trailer and is used to unload heavy items from the truck/trailer at the job site. Note that not all truck/trailer mounted forklifts are rough terrain forklifts. | |

**The preceding images of PIT’s were obtained from** [**www.OSHA.gov**](http://www.OSHA.gov)

**Appendix C**

**Powered Industrial Truck Training Certification Form**

**Name of Classroom Trainer: (print and sign)\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

**Name of Evaluator (if different) (print and sign):\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

**Make and model of PIT/s:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

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| --- | --- | --- | --- | --- |
| **Name (Print)** | **Date of classroom training** | **Date of hands-on training** | **Date of hands-on evaluation** | **Signature** |
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**Appendix D**

**Hands-On Evaluation Test for Powered Industrial Truck Operators**

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| **POWERED INDUSTRIAL TRUCK OPERATOR HANDS-ON EVALUATION** | | | | | | | | | |
|  |  |  |  |  |  |  |  |  |  |
| **Operator Name:** | |  |  |  | **Evaluation Date:** | |  |  |  |
| **Department:** | |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |
| **Directions:** Evaluate the operator on each factor. Indicate satisfactory performance by checking | | | | | | | | | |
|  | the "Yes" column. Indicate unsatisfactory performance by checking the "No" column. | | | | | | | | |
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|  |  |  |  |  |  |  | **Yes** | **No** | **NA** |
|  |  |  |  |  |  |  |  |  |  |
| (1) **Is operator's ability to complete pre-use inspection satisfactory?** | | | | | | |  |  |  |
|  |  |  |  |  |  |  |  |  |  |
| (2) **Does operator fasten their seatbelt prior to beginning test?** | | | | | | |  |  |  |
|  |  |  |  |  |  |  |  |  |  |
| (3) **Does the operator fully understand all controls?** | | | | | | |  |  |  |
| (Demonstrate control movement to achieve desired result). | | | | | |  |
|  |  |  |  |  |  |  |  |  |  |
| (4) **Maneuvering skills**: | | | | | | |  |  |  |
| (a) Smooth starting and stopping? | | | | | | |
| (b) Proper speed maintained? (No faster than a brisk walk) | | | | | | |  |  |  |
| (c) Forks carried as low as possible while in motion? | | | | | | |  |  |  |
| (d) Speed reduced at corners and intersections? | | | | | | |  |  |  |
| (e) Safe distance maintained from all obstacles? | | | | | | |  |  |  |
|  |  |  |  |  |  |  |  |  |  |
| (5) **Handling load**: | | | | | | |  |  |  |
| (a) Approaches load squarely? | | | | | | |
| (b) Forks spread as wide as load allows? | | | | | | |  |  |  |
| (c) Mast vertical when forks enter pallet? | | | | | | |  |  |  |
| (d) Load tilted back against backrest? | | | | | | |  |  |  |
|  |  |  |  |  |  |  |  |  |  |
| (6) **Driving with load**: | | | | | | |  |  |  |
| (a) Sounds horn at all blind intersections? | | | | | | |
| (b) Yields to pedestrians? | | | | | | |  |  |  |
| (c) Sounds horn in vicinity of doorways? | | | | | | |  |  |  |
| (d) Looks in direction of travel at all times? | | | | | | |  |  |  |
|  |  |  |  |  |  |  |  |  |  |
|  | | | | | | | **Yes** | **No** | **N/A** |
| (7) **Stacking**: | | | | | | |  |  |  |
| (a) Stacks material straight & squarely? | | | | | | |
| (b) Deposits load safely? (No excessive tilt action) | | | | | | |  |  |  |
| (c) Removes load from stack and lowers to safe level before turning to proceed in the direction of travel? | | | | | | |  |  |  |
|  | | | | | | |
| (8) **Traveling on inclined surface**: | | | | | | |  |  |  |
| (a) Forks as low as possible? | | | | | | |
| (b) Travels in straight path? (No turns on incline) | | | | | | |  |  |  |
| (c) Travels in proper direction? | | | | | | |  |  |  |
| (If carrying load, forks should be uphill) | | | | | | |
| (If not carrying load, forks should be downhill) | | | | | | |
| (9) **Parking**: | | | | | | |  |  |  |
| (a) Parks in safe location? | | | | | | |
| (b) Controls placed in neutral? | | | | | | |  |  |  |
| (c) Parking brake set? | | | | | | |  |  |  |
| (d) Forks lowered completely to floor? (Apply slight forward tilt) | | | | | | |  |  |  |
| (e) Ignition turned off and keys removed? | | | | | | |  |  |  |
|  |  |  |  |  |  |  |  |  |  |
| (10) **Comments** (*Must be included for all tasks marked “No”. If task is failed the evaluator must explain what was done incorrectly and have the trainee repeat the task until it is completed correctly*): | | | | | | | | | |
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| Based on an evaluation of the preceding abilities, the operator **PASSES or FAILS** (circle one) this | | | | | | | | | |
| performance evaluation. | | |  |  |  |  |  |  |  |
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| Evaluator signature: | |  |  |  |  | Date: |  |  |  |
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| Operator signature: | |  |  |  |  | Date: |  |  |  |
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**Appendix E**

**Evaluator Guidelines – Powered Industrial Truck**

***(Note: The evaluation can be done in-house using an experienced and competent PSU employee or an outside vendor/safety consultant may be used.***

1. Pre-Requisites:
   1. Completed the classroom portion of a PIT training class.
   2. Review and become familiar with the PSU PIT written program.
   3. Be experienced with the equipment you will be training on.
   4. Review owner’s manual.
2. Choose safe location:
   1. Open area.
   2. Away from vehicle and pedestrian traffic.
   3. Flat surface on solid ground.
   4. If necessary barricade area with orange cones or equivalent to keep vehicles and pedestrians out of the training area.
3. Review features of specific PIT with student:
   1. On/Off
   2. Steering
   3. Forks (raise, lower, in, out, side to side, etc)
   4. Mast (tilt)
   5. Stop/Go
   6. Seat belt
   7. Parking brake
   8. Fueling/Charging ports
   9. Fueling/Charging locations at site
4. Review site specific working conditions/hazards/safety concerns:
   1. Ramps/slopes
   2. Dock plates/dock levelers
   3. Overhead obstructions
   4. Pedestrian traffic areas
   5. Vehicle restricted areas (unstable surface, narrow aisles, etc)
   6. Hazardous locations (flammable, chemical, etc)
   7. Any other unique situations/areas
5. Use an empty pallet or empty container which is commonly lifted by forklift in the work area that the operator can safely practice with. To increase difficulty, stack numerous pallets on top of each other in order to increase the size and decrease the stability of the load.
6. Allow student to learn/practice actual operation of the equipment while supervised.
7. After the student gets comfortable with the equipment operation, begin the evaluation.
8. Use the “Hands-On Evaluation Test for Powered Industrial Truck Operators” found in Appendix D of the PSU PIT Program. Have employee complete each task on the form.
9. Allow student sufficient time to learn each task.
10. File evaluation form with supervisor/manager/safety officer.

**Appendix F**

**Safe Work Practices**

**General safe work practices**:

* Modifications and additions that may affect the capacity or safe operation of a PIT are strictly prohibited without the manufacturer’s written approval.
* Capacity, operation, and maintenance instruction markings will be changed as necessary if the manufacturer approves a modification.
* EHS must be notified before a modification takes place.
  + PIT’s will be kept in a clean condition, free of lint, excess oil, and grease. Noncombustible agents will be used to clean trucks as necessary.
  + PIT nameplates and associated markings must be in place and must be maintained in a legible condition.
  + PITs shall be operated at a speed that allows them to be brought to a complete stop in a safe manner.
  + Loads shall be carried at a height as low as practical above floor level.
  + PIT operators must yield to pedestrians within the work area.
  + Seat belts must be used if the PIT is so equipped.
  + PIT operators must slow down and sound the horn at all blind intersections and cross aisles.
  + All body parts shall remain within the operator’s compartment during PIT movement.
  + A clear view of the operator’s path of travel must be maintained at all times.
  + Operators shall slow down for wet or slippery surfaces.
  + No person shall be permitted to stand under the elevated portions of any PIT (whether loaded or empty).
  + When traveling behind another PIT or vehicle, operators shall maintain a following distance of at least three truck lengths including load.
  + Operators must approach ramps and inclines in a straight direction (not at an angle).
  + PITs may not be turned while on a ramp or incline.
  + PITs may not be parked in front of any fire protection equipment, emergency equipment, or in a manner that would obstruct a person from exiting the area.
  + Stunt driving and horseplay are strictly forbidden.
  + PITs shall not be driven up to anyone standing in front of a fixed object.
  + Wheels shall be blocked if PITs are parked on or near an incline.
  + No riders are allowed on PITs not designed for this purpose.
  + PITs may only be operated on grades or inclines for which they have been approved.
  + PITs must be brought to a complete stop before an operator dismounts the vehicle.
  + The load engaging means must be fully lowered, controls must be placed in neutral, and brakes must be set anytime the operator dismounts the PIT. The power must also be shut off if the operator is more than 25 feet away from the PIT or if the PIT is not within the operator’s view.
  + Attachments and auxiliary parts may only be used as intended by the manufacturer.
  + PITs shall not be driven onto any elevator unless the operator has determined the capacity of the elevator has not been exceeded. Once on the elevator, the PIT must be shut off and the brakes set.

**The following safety practices shall be adhered to when operating any PIT carrying a load:**

* + All PIT lifting attachments must have their capacity legibly marked.
  + Only stable loads within the rated capacity of the PIT shall be handled.
  + Loads shall always be fully engaged.
  + Grades shall be ascended and descended slowly and carefully.
  + PITs shall be driven with the load upgrade.
  + Loads shall be transported with the mast tilted slightly back for added stability.
  + PITs shall be driven in reverse whenever the load obstructs the driver’s forward view.
  + The load shall not be lifted or lowered while the PIT is in motion.

**The following safety practices shall be adhered to when loading/unloading a truck/trailer**:

* + The condition of the flooring must be inspected before loading/unloading.
  + Dock plates must be properly secured before driving on them.
  + Operators shall ensure truck brakes are set and dock locks are locked or wheel chocks are placed under the rear wheels to prevent trucks from rolling away from the dock while boarding with a powered industrial truck.
  + It is recommended that trailers be unloaded while the tractor is attached. If this is not possible, operators shall ensure that fixed jacks are used to support semi-trailers and prevent up-ending during boarding and unloading.
  + When using portable jacks to support semi-trailers, they shall be used in conjunction with the fixed jacks located on the trailer. Operators shall follow the portable jack manufacturer's instructions on the appropriate number and placement of these jacks.

**The following safety practices shall be adhered to when operating any PIT model designed to lift personnel or when a PIT utilizes a platform to raise employees**:

* + Platforms shall only be commercially purchased and shall not be fabricated in-house.
  + The operator must wear a full body harness and be attached to a self retracting lifeline when utilizing a PIT in which a full guardrail system is not present (Order Picker, etc).
  + PITs which utilize a removable type of worker platform must be protected by a full guardrail system.
  + PIT platforms must be secured to the mast to eliminate the chance of the platform sliding off the forks.
  + Platforms may not be raised while the PIT is in motion.
  + Operators may not climb or step outside PIT platform railings.
  + Ladders or other objects may not be placed on platforms as a means of providing additional reach. (Both of the operator’s feet must remain on the platform).
  + Caution shall be taken when operating in areas with overhead piping and doorways. Hardhats are required to be worn where overhead hazards are present.
  + Outriggers must be used as recommended by the manufacturer.
  + Proper clearances from electrical lines must be maintained in accordance with the following table:

|  |  |
| --- | --- |
| **Voltage Range (Phase to Phase)** | **Minimum Safe Approach Distance (feet)** |
| 0 to 300V | Avoid Contact |
| 300V to 50 KV | 10 |
| >50KV to 200KV | 15 |
| >200KV to 350KV | 20 |
| >350KV to 500KV | 25 |
| >500KV to 750KV | 35 |
| >750KV to 1000KV | 45 |