

### **35. Powered Industrial Trucks (PIT) (Forklifts and Material Handlers)**

This program has been developed to make PIT operators aware of the hazards associated with motorized truck use as well as to provide guidance for safe truck operations.

- 35.01. Employees will be authorized to operate PIT only after they have successfully demonstrated their understanding of proper procedures for inspection, use, and refueling or recharging. Operators will demonstrate knowledge and abilities by passing a written test and performing designated maneuvers while operating the PIT. All operators will be evaluated by a Department supervisor, program consultant or a designated competent person.
- 35.02. Power; weight; size; restricted visibility; and, often, high center of gravity, operation of industrial trucks demands skill and attention to detail. Additionally, the load presents potential hazards if not properly secured, balanced, and or properly placed on the truck.
- 35.03. The department supervisor, program consultant or a designated competent person will determine whether the atmosphere or location in which our industrial trucks will operate is hazardous or non-hazardous and, after further assessing our needs, will determine which types of trucks are appropriate and allowed for our specific operations.
- 35.04. In the unlikely event that unsafe industrial motor truck operations are observed, retraining will be given with emphasis on correcting the improper behavior. PIT shall be operated in a professional manner and anything less shall not be tolerated.
- 35.05. All truck operators will have ready access to this program manual and all truck operator manuals.
- 35.06. Forklifts

PIT training should also apply to numerous types of powered industrial trucks such as: tractors; platform lift trucks; motorized hand trucks; and other specialized industrial trucks powered by electric motors or internal combustion engines.

#### 35.07. General Requirements:

- 35.07.01. All PIT operators shall be thoroughly familiar with the equipment. This includes knowing:
  - 35.07.02. Instinctively what the function of each control.
  - 35.07.03. How to perform and document a safety inspection.
  - 35.07.04. The limitations such as maximum load, height and width, visibility, stability, and surface requirements.
  - 35.07.05. The stopping and turning ability and its effect on loads.
  - 35.07.06. The below safety rules and guidelines to which one shall adhere to while operating a PIT. These rules are designed to protect the operator and or persons adjacent to the activity area.
  - 35.07.07. Specifically:
    - 35.07.07.01. No person shall operate a PIT unless training is successfully completed and authorized in writing by a Department Supervisor.

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- 35.07.07.02. Prior to authorization, the operator will have read this program, received training, passed a quiz on PIT operations, and been evaluated on operational skills.
- 35.07.07.03. Authorization to operate one type of PIT does not automatically authorize a person to operate all. Different power sources, visibility restrictions, controls, and capacities may dictate a separate certification process be required for a different type of PIT. There may be instances where a new vehicle does not necessitate new training and a demonstration of proficiency. A newer model of a currently used truck may be identical to the truck the operator is qualified on as far as safety and operations are concerned. As a general rule, each type of truck has its own characteristics, limitations, and idiosyncrasies -- each model of a type of truck may or may not be unique. This shall be a judgment of the department supervisor, program consultant or a designated competent person if additional training is required.
- 35.07.07.04. No riders are allowed on our PIT unless:
  - 35.07.07.05. The truck is specifically designed for such use.
  - 35.07.07.06. The rider is authorized by the department supervisor, program consultant or a designated competent person.

NOTE: PIT are generally designed to move product, supplies and equipment, not personnel.

- 35.07.08. The department supervisor, program consultant or a designated competent person shall revoke the authorization to operate a PIT if unsafe acts are observed or it is apparent that the operator has not retained the knowledge and job skills necessary to safely perform PIT operations.
  - 35.07.09. An operator who has lost authorization to operate a truck will be retrained, reevaluated and when appropriate, re-authorized to operate.
  - 35.07.10. At the beginning of each shift, the operator will inspect the PIT using the PIT Daily Checklist. See appendix for form.
  - 35.07.11. If deficiencies relating to safety are found, the deficiencies will be noted on the checklist and reported to a Department supervisor, program consultant or a designated competent person. The vehicle will not be used until safety defects are repaired.
  - 35.07.12. If cosmetic damage is discovered during the daily check, it will be noted on the Checklist; however, the truck will be used. Cosmetic faults will not delay any operations.
- 35.08. Hazards. The major safety hazards involved in truck operation include:
- 35.08.01. Physically hitting a person and or object with the truck or load.
  - 35.08.02. Having a load fall and hit the operator or other person.
  - 35.08.03. Having the PIT tip and crush the operator or other person.
  - 35.08.04. Fire or explosion during refueling and or recharging.

- 35.08.05. Unintentional Contact with a Person or Object
- 35.08.06. Never drive up to a person standing in front of a fixed object.
- 35.08.07. When possible, stay within delineated travel lanes or aisles.
- 35.08.08. Be seen and or heard.
- 35.08.09. Ensure that adequate lighting is available.
- 35.08.10. Maintain a clear view of travel. If the load blocks or restricts the view, the operator will drive with the load trailing or backwards.
- 35.08.11. Slow down, sound horn, and do not pass where vision is restricted.
- 35.08.12. Operate the truck at speeds that will allow it and the load to be stopped in a safe, smooth, manner.
- 35.08.13. Be aware of floor conditions. Remove loose objects that have found their way to the truck travel lanes. Operate the PIT at slower speeds on wet or slippery floors.
- 35.08.14. Stunt or reckless driving is prohibited.
- 35.08.15. Be aware of the height of the PIT and, if equipped, its mast and load.
- 35.08.16. Never allow anyone to stand or pass under an elevated portion of any truck at any time.

### 35.09. Falling Loads

- 35.09.01. Know your load -- do not "over stack". Practically all loads lifted or hauled by a forklift are not secured to the PIT, ensure the load is properly stacked. Cartons generally should be interlaced or banded.
- 35.09.02. If lifting a load or pallet, position the forks or other engaging means as far under the load as possible.
- 35.09.03. Travel with the load in the lowest position for stability as well as prevention of hitting objects overhead. If using forks, tilt the load backward for stabilization.
- 35.09.04. Do not exceed the truck's rated capacity or stack loads too high.
- 35.09.05. Do not make abrupt movements such as slamming the brakes or high speed turns.
- 35.09.06. A load backrest extension will reduce the possibility of part of the load falling rearward.
- 35.09.07. When using a fork lift, the forks may be tilted forward only for picking up or setting down a load.

### 35.10. Tipping

A PIT is, by design, narrow allowing them greater access within the work setting. Unfortunately, a narrow track offers less stability. Tipping or falling off an edge or dock is a preventable incident by following the guidelines below. If your PIT tips, keep your body and limbs within the safety of the cage. Wear a seat belt if the truck is so equipped.

- 35.10.01. Stay within travel lanes.

- 35.10.02. If entering a trailer, ensure:
- 35.10.03. The trailer brakes are engaged.
- 35.10.04. The trailer is secured from movement by means of chocks and/or a locking mechanism.
- 35.10.05. The tractor is either shut off or removed from the trailer.
- 35.10.06. The trailer is squared up with the dock opening and dock plates are secure.
- 35.10.07. The trailer floor is capable of supporting the forklift and its load.
- 35.10.08. The lighting within the trailer is adequate.

NOTE: Falling off a dock edge because a trailer has moved is invariably a serious incident. Do not count on the tractor-trailer driver to lock his brakes or even trust that his brakes work. Physically check and ensure that the trailer into which you are taking your forklift is flush against the dock. If possible, the trailer should be attached to the dock; in all cases, the wheels shall be chocked.

- 35.10.09. Travel with the load in the lowest possible position and avoid sharp turns at higher speeds as well as abrupt truck movements.
  - 35.10.10. Be aware of the surface on which you are traveling -- its traction, ability to hold weight, slope, and surface.
- 35.11. Fire and or Explosion During Refueling or Battery Recharging
- 35.11.01. Refueling incidents are not common experiences, however should they occur, they would be sudden and possibly catastrophic. Follow the manufacturer's owner's manual and local fire laws.
  - 35.11.02. There is absolutely NO SMOKING or open flame during any portion of the refueling and or recharging process.
  - 35.11.03. At least an ABC rated fire extinguisher, shall be readily available when refueling propane. Facilities for quick drenching of the eyes and body shall be readily available.

### 35.12. Other Considerations

The program is concerned with the personal safety of PIT operators. However, when discussing truck operations, it would be remiss if it were not pointed out that improper PIT operations could also result in physical damage to products, trucks, and or facilities. Proper PIT operation will reduce personal injury incidents, and, as an added benefit, prevent general damage.

### 35.13. Operator Protection

- 35.13.01. A hazard assessment of PIT operations will be conducted by a department supervisor, program consultant or a designated competent person. Particular attention will be given to hand, head, eye, and foot protection as well as environmental conditions such as atmospheres, heat or cold. If the truck is equipped with a seat belt, it shall be worn when the truck is moving.
- 35.13.02. Keep your limbs within the running lines of the truck and keep your hands and fingers away from moving parts -- particularly the mast on a fork lift truck.

35.13.03. The department supervisor, program consultant or a designated competent person will perform a hazard assessment of PIT operations and determine the personal protective equipment (PPE) requirements. If PPE (examples: steel toed boots, leather gloves, hard hat, eye protection, etc.) is required, it shall be worn.

### 35.14. PIT Operation

35.14.01. In addition to safety operating practices previously identified in this manual, the following will be considered general operating procedures:

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

35.14.03. Operators leaving the PIT shall ensure the load is fully lowered; controls neutralized, and brakes set. On an incline, the wheels shall be chocked. If the operator is 25 feet or more from the truck or does not have a clear view of the truck, the power to the truck shall be shut off and the keys removed.

35.14.04. A safe distance shall be maintained from the edge of ramps or platforms while on any elevated dock, platform or freight car.

35.14.05. PIT shall not be used for opening or closing freight doors.

35.14.06. PIT, like all items of equipment, will be used for the purpose for which they were designed. Be aware that if the operator of a semi-trailer has placed the rear wheels in a far forward position, the trailer may act as a “teeter-totter” when a heavy forklift enters the trailer. When a trailer is not coupled to a tractor, fixed jacks may be necessary to support the semi-trailer during loading or unloading. Be aware that the overhead guard is designed to prevent injury from the impact of small packages, boxes, bagged material, etc. -- it is not designed to withstand the impact of a falling capacity load.

35.14.07. In the event persons are lifted by a PIT, a lifting platform shall be securely attached to the lifting mechanism and the persons on the safety platform shall have means of shutting off power to the PIT.

35.14.08. If more than one PIT is operated, they shall be separated by a safe distance of a minimum of three PIT lengths and may not pass each other in intersections, blind spots, or other dangerous locations. The right of way shall be yielded to other vehicles in emergency situations.

35.14.09. PIT traveling in the same direction shall not be passed at all.

35.14.10. Driving on grades:

35.14.10.01. Grades shall be ascended or descended slowly.

35.14.10.02. When ascending or descending grades in excess of 10 percent, loaded trucks shall be driven with the load upgrade.

35.14.10.03. Motorized hand trucks shall enter confined areas with the load end forward.

### 35.15. Maintenance

- 35.15.01. While the operator is responsible for checking the PIT before use, actual mechanical maintenance shall be performed by a qualified and authorized person.
- 35.15.02. If at any time a PIT is found to be in need of repair, defective, overheating, or in any way unsafe, the truck shall be taken out of service until it has been restored to safe operating condition.
- 35.15.03. Forklifts should be kept reasonably clean and free of excess oil and grease.
- 35.16. Duties of the department supervisor, program consultant or a designated competent person:
  - 35.16.01. Operator training, qualification and authorization.
  - 35.16.02. Hazard assessment of PIT operations.
  - 35.16.03. Identification deficient PIT operators; by demonstration of performance; have demonstrated a lack of retained knowledge or ability to safely operate a powered industrial truck. These employees will receive retraining.
  - 35.16.04. Keeping abreast of developments in the materials handling field with an emphasis on safety.
  - 35.16.05. Additionally, the administrator will ensure that all truck operators have readily available this program manual, the individual PIT Operator and Owner Manual.
- 35.17. Training
  - 35.17.01. The department supervisor, program consultant or a designated competent person will administer the training portion of this program.
  - 35.17.02. Interactive training will be given with ample opportunity to ask questions and clarify all aspects of PIT operation relating to safety. Prior to actual operation on the job, all PIT operators will become familiar with the contents of this program as well as the operator's manual applicable to the specific powered industrial truck. Each operator will demonstrate an understanding of PIT operations and complete an operational driving test which will include inspection, maneuvering, fueling and or charging.
  - 35.17.03. The department supervisor, program consultant or a designated competent person will ensure that all PIT operators have a complete understanding of the below listed topics:
    - 35.17.04. Truck Related Topics:
      - 35.17.04.01. Operating instructions, warnings, or precautions listed in the operator's manual for the types of vehicle that the employee is being trained to operate.
      - 35.17.04.02. Differences between the truck and the automobile.
      - 35.17.04.03. Controls and instrumentation: where they are located, what they do, and how they work.
      - 35.17.04.04. Engine or motor operation.
      - 35.17.04.05. Steering and maneuvering.

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- 35.17.04.06. Visibility (including restrictions due to loading).
- 35.17.04.07. Fork and attachment adaptation, operation, and use limitations.
- 35.17.04.08. Vehicle capacity.
- 35.17.04.09. Vehicle stability.
- 35.17.04.10. Any vehicle inspection and maintenance that the operator will be required to perform.
- 35.17.04.11. Refueling and/or charging and recharging of batteries.
- 35.17.04.12. Operating limitations.
- 35.17.05. Workplace Related Topics:
  - 35.17.05.01. Surface conditions where the vehicle will be operated.
  - 35.17.05.02. Composition of loads to be carried and load stability.
  - 35.17.05.03. Load manipulation, stacking, and un-stacking.
  - 35.17.05.04. Pedestrian traffic in areas where the vehicle will be operated.
  - 35.17.05.05. Narrow aisles and other restricted places where the vehicle will be operated.
  - 35.17.05.06. Hazardous (classified) locations where the vehicle will be operated.
  - 35.17.05.07. Ramps and other sloped surfaces that could affect the vehicle's stability.
  - 35.17.05.08. Closed environments and other areas where insufficient ventilation or poor vehicle maintenance could cause a buildup of carbon monoxide or diesel exhaust.
  - 35.17.05.09. Other unique or potentially hazardous environmental conditions in the workplace that could affect safe operation.
  - 35.17.05.10. New truck operators may operate powered trucks in a training capacity:
    - 35.17.05.11. When they are under the direct supervision of persons who have the knowledge, training, and experience to train and evaluate their competence.
    - 35.17.05.12. Where such operation do not endanger themselves or others.
- 35.17.06. The department supervisor, program consultant or a designated competent person will validate the training and evaluation has been accomplished per the following schedule:
  - 35.17.06.01. Before the employee is assigned to operate a forklift.
- 35.17.07. Refresher training shall be completed:
  - 35.17.07.01. At 3 year intervals or at 1st occurrence of:

- 35.17.07.01.01. Unsafe PIT operation is observed.
- 35.17.07.01.02. After any near-miss or incident.
- 35.17.07.01.03. Operator is to be assigned to drive a different type of PIT.
- 35.17.07.01.04. Workplace changes that could affect safe operation of the PIT.

### 35.18. Use of PIT to support scaffold platforms

35.18.01. PIT may be used to support scaffold platforms with the following conditions:

- 35.18.01.01. The forklift will be designed for such use as indicated either:
  - 35.18.01.02. In the owner's manual, or
  - 35.18.01.03. By a letter from the manufacturer allowing such use, or
  - 35.18.01.04. Certification by a registered engineer that the forklift is so designed.
- 35.18.01.05. The entire scaffold platform is securely attached to the forks.
- 35.18.01.06. The PIT is not moved horizontally while the platform is occupied.
- 35.18.01.07. The platform and PIT meets the recommended requirements for capacity, construction, access, use, and fall protection.
- 35.18.01.08. If the platform is not designed by the manufacturer of the forklift, it shall be designed and assembled by a qualified person.
- 35.18.01.09. The PIT shall be capable of supporting, without failure, its own weight and at least four times the maximum intended load.
- 35.18.01.10. The platform for elevating personnel shall not extend more than 10 inches beyond the wheelbase of the machine in use.
- 35.18.01.11. The employees on the platform shall be able to have travel and power controls at the platform level. This requirement is fulfilled by having the PIT operator remain with the operator compartment while personnel are on the platform.
- 35.18.01.12. The use of a PIT to support a scaffold platform will be used only after a determination that the use of other equipment such as scaffolds, scissor lifts, aerial lifts and ladders is not practical.