

Marathon Petroleum Company LP			
<b>Powered Industrial Trucks</b>	Document No.: <b>RSW-SAF-035-DT</b>	Approval Date: <b>11/22/16</b>	Page <b>1 of 10</b>
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	Document Custodian: <b>Environmental, Safety and Security</b>		

## 1.0 PURPOSE

- 1.1 To provide safe work procedures for the use of powered industrial trucks at the Michigan Refining Division.

## 2.0 SCOPE

- 2.1 This procedure applies to all persons, including all visitors and contractors, working on Marathon Petroleum LP, Michigan Refining Division (MRD) property.
- 2.2 This procedure applies to all powered industrial trucks and associated attachments.
- 2.3 This procedure does not apply to Gators.

## 3.0 PROCEDURE

### 3.1 TRAINING

- 3.1.1 Training for Powered Industrial Truck (PIT) operators is conducted by an experienced individual, who has the knowledge, training, and experience to train and evaluate the competence of the operator.
- 3.1.2 All operational training is conducted under close supervision.
- 3.1.3 All training and evaluation must be completed before an operator is permitted to use a Powered Industrial Truck (forklift, etc.) without continual and close supervision.
- 3.1.4 A PIT operator license is issued to Marathon Employees upon successful completion of the training.
- 3.1.5 Trainees may operate a powered industrial truck only under the direct supervision of an experienced individual, who has the knowledge, training, and experience to train operators and evaluate their competence; and where such operation does not endanger the trainee or other employees.
- 3.1.6 Training consists of a combination of formal instruction, practical training (demonstrations performed by the trainer and practical exercises performed by the trainee), and evaluation of the operator's performance in the workplace.
- 3.1.7 **Truck-related training topics:**
- 3.1.7.1 Operating instructions, warnings, and precautions for the types of truck the operator will be authorized to operate.
- 3.1.7.2 Differences between the truck and the automobile.
- 3.1.7.3 Truck controls and instrumentation: where they are located, what they do, and how they work.

- 3.1.7.4 Engine or motor operation.
  - 3.1.7.5 Steering and maneuvering.
  - 3.1.7.6 Visibility (including restrictions due to loading).
  - 3.1.7.7 Fork and attachment adaptation, operation, and use limitations.
  - 3.1.7.8 Vehicle capacity.
  - 3.1.7.9 Vehicle stability.
  - 3.1.7.10 Vehicle inspection and maintenance that the operator will be required to perform.
  - 3.1.7.11 Changing of LPG tanks, refueling, and recharging of batteries.
  - 3.1.7.12 Operating limitations.
  - 3.1.7.13 Any other operating instructions, warnings, or precautions listed in the operator's manual for the type of vehicle that the employee is being trained to operate.
- 3.1.8 **Workplace-related topics:**
- 3.1.8.1 Surface conditions where the vehicle will be operated.
  - 3.1.8.2 Composition of loads to be carried and load stability.
  - 3.1.8.3 Load manipulation, stacking, and un-stacking.
  - 3.1.8.4 Pedestrian traffic in areas where the vehicle will be operated.
  - 3.1.8.5 Narrow aisles and other restricted places where the vehicle will be operated.
  - 3.1.8.6 Hazardous (classified) locations where the vehicle will be operated.
  - 3.1.8.7 Ramps and other sloped surfaces that could affect the vehicle's stability.
  - 3.1.8.8 Closed environments and other areas where insufficient ventilation or poor vehicle maintenance could cause a buildup of carbon monoxide (CO) or diesel exhaust.
  - 3.1.8.9 Other unique or potentially hazardous environmental conditions in the workplace that could affect safe operation.
- 3.1.9 **Refresher training and evaluation**
- 3.1.9.1 Refresher training, including an evaluation of the effectiveness of that training will be conducted to ensure that the operator has the knowledge and skills needed to operate the powered industrial

truck safely. Refresher training in relevant topics is provided to the operator when:

- 3.1.9.1.1 The operator has been observed operating the vehicle in an unsafe manner.
- 3.1.9.1.2 The operator has been involved in an accident or near-miss incident.
- 3.1.9.1.3 The operator has received an evaluation that reveals that the operator is not operating the truck safely.
- 3.1.9.1.4 The operator is assigned to drive a different type of truck.
- 3.1.9.1.5 A condition in the workplace changes in a manner that could affect safe operation of the truck.
- 3.1.9.1.6 Once every 3 years an evaluation will be conducted of each powered industrial truck operator's performance.

## 3.2 GENERAL USE

- 3.2.1 Only authorized and trained personnel will operate PITs. Unless during training (See Section 3.1 TRAINING, 3.1.1 and 3.1.2)
- 3.2.2 The operator shall carry their issued license on their person during working hours.
- 3.2.3 The license must indicate the type of PIT an operator has been trained on and is qualified to operate.
- 3.2.4 The operator shall perform pre-shift inspections. See Section 3.10 Powered Industrial Truck Pre-Shift Inspection Checklist.
- 3.2.5 Any safety defects (such as hydraulic fluid leaks, defective brakes, steering, lights (if applicable to safe use), horn, missing fire extinguisher, seat belt, back-up alarm, etc.) will be reported for immediate repair or have the PIT taken "Out of Service".
- 3.2.6 A seatbelt must be worn when operating a PIT if the PIT is so equipped.
- 3.2.7 Loads shall be tilted back and carried according to the manufacturer's specifications.
- 3.2.8 Loads that restrict the operator's vision shall be transported backwards unless you utilize a spotter. See RSW-SAF-047-DT Motor Vehicle Safety and Driving Standard Section 3.4.11 Requirements for Spotters
- 3.2.9 Passengers are not permitted. Only the operator shall ride in the PIT unless the PIT is equipped with a passenger seat.
- 3.2.10 Aisles (where applicable) shall be maintained free from obstructions, marked and wide enough for PIT operation.

3.2.11 Lift capacity must be marked on all PITs. The operator shall assure load does not exceed rated weight limits.

3.2.12 Operators shall report all accidents to their supervisor immediately.

### 3.3 OPERATIONS

3.3.1 PITs shall not be driven up to anyone standing in front of a fixed object.

3.3.2 No person shall be allowed to stand or pass under the forks of any truck, whether loaded or empty.

3.3.3 Arms or Legs shall not be placed between the uprights of the mast or outside the running lines of the PIT.

3.3.4 When a PIT is left unattended, load engaging means shall be fully lowered, controls neutralized, power shut off, and brakes set. Wheels shall be blocked if PIT is parked on an incline.

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

3.3.6 Sufficient clearance shall be maintained under overhead installations, lights, pipes, sprinkler systems, etc. to avoid damage.

3.3.7 An overhead guard will be used as protection against falling objects. It should be noted that an overhead guard is intended to offer protection from the impact of small packages, boxes, bagged material, etc. representative of the job application, not to withstand the impact of a falling capacity load.

3.3.8 A hardhat is not required if the PIT is equipped with a sufficient overhead guard. Contact the Safety Department for questions regarding sufficient overhead guarding.

3.3.9 PITs shall not be parked where they are blocking fire lanes, egress aisles, access to stairways, or fire equipment.

### 3.4 TRAVELING

3.4.1 All refinery traffic rules shall be observed.

3.4.2 A safe distance shall be maintained (approximately three truck lengths) between PITs traveling together. The PIT shall be kept under control at all times.

3.4.3 PITs or other vehicles traveling in the same direction at intersections, blind spots, or other dangerous locations shall not be passed unless the operator waves you by.

3.4.4 The driver is required to look in the direction of, and keep a clear view of the path of travel.

3.4.5 Grades shall be ascended and descended slowly. When ascending or descending grades in excess of 10 percent, loaded PITs are to be driven with the load upgrade. On all grades the load and load engaging means

are to be tilted back if applicable, and raised only as far as necessary to clear the road surface.

- 3.4.6 Stunt driving and horseplay is prohibited.
- 3.4.7 The driver is required to slow down for wet and slippery surfaces.
- 3.4.8 Running over loose objects on the roadway surface shall be avoided.
- 3.4.9 While negotiating turns, speed shall be reduced to a safe level by means of turning the hand steering wheel in a smooth, sweeping motion. Except when maneuvering at a very low speed, the hand steering wheel shall be turned at a moderate, even rate.

### 3.5 **LOADING**

- 3.5.1 Only stable or safely arranged loads shall be handled. Caution shall be exercised when handling off-center loads which cannot be centered.
- 3.5.2 When draining portable totes into stationary totes, the tote must be secured to the mast and/or the forks with a strap(s) capable of supporting the tote to prevent the tote from falling off the forks.
- 3.5.3 The operator shall maintain a safe distance from the tote when draining tote contents.
- 3.5.4 Long or high (including multiple tiered) loads which may affect capacity shall be adjusted.
- 3.5.5 PITs equipped with attachments shall be operated as partially loaded trucks when not handling a load.
- 3.5.6 A load engaging means shall be placed under the load as far as possible; the mast will be carefully tilted backward to stabilize the load.
- 3.5.7 Extreme care shall be used when tilting the load forward or backward, particularly when high tiering. Tilting forward with load engaging means elevated is prohibited except to pick up a load. An elevated load shall not be tilted forward except when the load is in a deposit position over a rack, stack, or ground. When stacking or tiering, only enough backward tilt to stabilize the load shall be used.

### 3.6 **LIFTING AND ATTACHMENT USE**

- 3.6.1 Powered industrial trucks that can be configured or utilized to hoist and lower materials by means of a winch or hook, including slings and shackles shall meet the requirements of RSW-SAF-029-DT Rigging and Lifting and MIOSHA Construction Part 10 - Cranes and Derricks
- 3.6.2 Attachments utilized on powered industrial trucks shall be approved by manufacturer.
- 3.6.3 Any modification or attachment which affects the capacity or safe operation of the equipment shall be made with written manufacturer's approval. If such modifications are made the capacity, operation and

maintenance instruction plates, tags or decals shall be changed accordingly.

- 3.6.4 In no case shall the modification or attachments reduce the equipment's original safety factor.

### 3.7 **LOADING AND UNLOADING OF TRUCKS/TRAILERS/RAILCARS**

- 3.7.1 The flooring of trucks and trailers shall be checked for breaks and weakness before they are driven onto.
- 3.7.2 To prevent semi trucks from rolling while they are boarded with PITs, all of the following precautions shall be taken:
- 3.7.2.1 The brakes of semi trucks will be set;
  - 3.7.2.2 Wheel chocks will be placed under the rear wheels;
  - 3.7.2.3 Dock-Locks will be coupled to the truck and receiving bay.
- 3.7.3 Fixed jacks may be necessary to support a semi-trailer and prevent upending during the loading or unloading when the trailer is not coupled to a truck/tractor.
- 3.7.4 Dock boards shall be utilized only within the limitations set by the manufacturer. Weight capacities will not be exceeded.

### 3.8 **SAFE WORK PERMIT**

- 3.8.1 Use of a powered industrial truck within a complex unit is considered "Vehicle Entry" and requires a safe work permit.
- 3.8.2 See RSW-SAF-006-DT Safe Work Permit Procedure

### 3.9 **REFUELING, RECHARGING, AND CHANGING OF PIT LPG TANKS**

- 3.9.1 Refueling –  
See RSW-SAF-001-DT General Safety Rules 3.2 Vehicles 3.2.1.7  
See RSW-SAF-080-DT Storage and Handling of Flammable and Combustible Materials Section 3.2.1 Fueling
- 3.9.2 Recharging of PIT batteries is performed as directed by the manufacturer's guidelines. Owner's manuals can be found at the Motor Pool garage.
- 3.9.3 Changing of PIT LPG (liquefied petroleum gas) tanks is performed as directed by the manufacturer's guidelines. Owner's manuals can be found at the Motor Pool garage.

### 3.10 **MAINTENANCE**

- 3.10.1 Any power-operated industrial truck not in safe operating condition shall be removed from service. Such conditions include but are not limited to:
- 3.10.1.1 The service and parking brakes do not perform their intended function.

- 3.10.1.2 The fuel systems leaks.
- 3.10.1.3 A lift cylinder of a load engaging means allows an excessive downward drift of the load engaging means loaded or unloaded.
- 3.10.1.4 A tilt cylinder of a mast allows an excessive forward drift of the mast with the mast in a vertical position and a capacity load on the fork or load engaging means.
- 3.10.1.5 The steering mechanism allows free play of the steering wheel of more than 1/4 turn on trucks capable of speeds up to 8 miles per hour and more than 1/8 turn on trucks capable of speeds over 8 miles per hour.
- 3.10.1.6 A hydraulic system leaks and creates a hazard for an employee and equipment in the area.
- 3.10.2 Repairs to a fuel and/or ignition system which involve a fire hazard shall be made in locations free of flammable gases or vapors, combustible dusts, and/or ignitable fibers.
- 3.10.3 Trucks in need of repairs to the electrical system shall have the battery disconnected prior to such repairs.
- 3.10.4 Replacement parts shall have the equivalent safety of the original part.
- 3.10.5 A truck running in excess of normal operating temperature which creates a hazardous condition shall be removed from service and repaired.
- 3.10.6 Trucks shall be kept in a clean condition.
- 3.10.7 All repairs shall be made by authorized personnel.
- 3.11 **POWERED INDUSTRIAL TRUCK PRE-SHIFT INSPECTION CHECKLIST**
  - 3.11.1 An inspection of the following items (as applicable) shall be conducted by the operator prior to use each shift:
    - 1. Accessory Control
    - 2. Battery Indicator
    - 3. Brakes
    - 4. Fluid Levels
    - 5. Forks, Mast, Chains, Stops, Backrest
    - 6. Horn
    - 7. Hydraulic Cylinders
    - 8. Hydraulic Hoses and Fittings
    - 9. Lift Control
    - 10. Lights (if needed for safe operation)
    - 11. Limit Switches
    - 12. LP Leaks
    - 13. Overhead Guard
    - 14. Steering
    - 15. Tilt Control
    - 16. Tires and Wheels
    - 17. Excessive change in operating temperature

If any deficiencies are found, the unit is to be placed OUT OF SERVICE until the problem has been corrected. Additionally, it is the operator's responsibility to notify the immediate supervisor and fill out a maintenance request.

#### 4.0 DEFINITIONS

Attachment - a device, other than conventional forks or load backrest extension, mounted permanently or removed on the elevating mechanism of a truck for handling the load. Popular attachments are fork extensions, clamps, rotating devices, side shifters, load stabilizers, rams, and booms.

Capacity - when referring to trucks means:

(a) The capacity of a truck equipped with a load carriage and forks, or with attachments, is the maximum weight in pounds, at a specified load center which the truck, based on the strength of its various components and applicable stability, can lift to the maximum elevation of the load engaging means. Alternate capacities may be established at the same specified load center and at less than maximum elevation of the load engaging means.

(b) The capacity of a truck equipped with a platform is the maximum weight in pounds, at a specified load center which the truck, based on the strength of its various components, can lift to the maximum elevation of the load engaging means.

Carriage - a support structure for forks or attachment, generally roller mounted, traveling vertically within the mast of a cantilever truck.

Counterbalanced truck - a truck equipped with load engaging means wherein all the load during normal transporting is external to the polygon formed by the wheel contacts.

Electric truck - a truck in which the principal energy is transmitted to motors in the form of electricity from a power source such as, but not limited to, a battery or motor generator.

Forks - horizontal tine-like projections, normally suspended from the carriage, for engaging and supporting loads.

Fork height - the vertical distance from the floor to the load carrying surface adjacent to the heel of the forks with mast vertical, and in the case of a reach truck, with the forks extended.

Fork-lift truck - a light-lift self-loading truck equipped with load carriage and forks for transporting and tiering loads.

Internal combustion engine truck - a truck in which the power source is a gas, LP gas, gasoline, or diesel type engine.

Liquefied petroleum gas (LP gas) - a fuel which is composed predominantly of any of the following hydrocarbons, or mixtures of them: propane, propylene, butanes (normal butane or iso-butane) and butylenes.

Load-axle - the truck axle nearest the load.

Load backrest extension - a device extending vertically from the fork carriage frame.

Load center - the horizontal longitudinal distance from the intersection of the horizontal load-carrying surfaces and vertical load-engaging faces of the forks, or equivalent load positioning structure, to the center of gravity of the load.



Load engaging means - a load handling device attached to a powered industrial truck for the purpose of handling a load.

Mast - a support member providing the guideways permitting vertical movement of the carriage. It is usually constructed in the form of channels or similar sections providing the supporting pathway for the carriage rollers.

Operator - an employee who has been trained, tested, and authorized by the present employer to operate a powered industrial truck.

Overhead guard - a framework fitted to a truck over the head of a riding operator.

Parking brake - a device to prevent the movement of a stationary truck.

Powered industrial truck (PIT) or "truck" - a mobile, power driven vehicle used to carry, push, pull, lift, stack, or tier material.

Tire - a tire which may be standard solid, cushion solid, pneumatic or solid pneumatic style.

Tiering - a process of placing a load on or above another load.

Unattended truck - a truck which is beyond the vision or more than 25 feet from the operator, whichever is less.

## 5.0 REFERENCES

MIOSHA General Industry Part 21 – Powered Industrial Trucks  
MIOSHA Construction Part 10 – Cranes and Derricks  
MIOSHA Construction Part 13 – Mobile Equipment  
RSW-SAF-047-DT Motor Vehicle Safety and Driving Standard  
RSW-SAF-006-DT Safe Work Permit Procedure  
RSW-SAF-001-DT General Safety Rules  
RSW-SAF-080-DT Storage and Handling of Flammable and Combustible Materials  
RSW-SAF-029-DT Rigging and Lifting

## 6.0 REVISION HISTORY

Revision number	Description of change	Written by	Approved by	Effective date
0	Original Procedure	E. Chase	Steering Committee 8/16/13	8/23/13
1	Updated header per RGD-1051-DT, corrected dating in footers	F. Ebbert	J. Rabideau	11/01/15
2	Scheduled Review no changes	F. Ebbert	J. Rabideau	11/22/16
3	Added Section 3.6 Lifting and Attachment Use. Updated references	W. Merrifield	J. Rabideau	12/05/17