STANDARD PRACTICE INSTRUCTION

DATE IMPLEMENTED: 4 April 2019

SUBJECT: Powered Industrial Trucks

REGULATORY STANDARD: OSHA - 29 CFR 1910.178

BASIS: Accidents resulting from operating a powered industrial truck can result in severe personal injury or death, major property damage and major damage to company products. This poses a serious problem for workers and their employer. The OSHA Powered Industrial Trucks Standard establishes uniform requirements to make sure that hazards associated with the use of Powered Industrial Trucks are evaluated, and that this hazard information and training is transmitted to all affected workers.

GENERAL: Nowland Associates, Inc. will ensure that the requirements of the OSHA Standard for powered industrial trucks will be adhered to. This standard practice instruction is intended to address comprehensively the issues of; employee training, authorization, safety requirements, fire protection, new purchase designs, maintenance, and general operation of fork trucks, tractors, platform lift trucks, motorized hand trucks, and other specialized industrial trucks used within our facility.

RESPONSIBILITY: The company Safety Officer is solely responsible for all facets of this program and has full authority to make necessary decisions to ensure the success of the program. The Safety Officer will develop written detailed instructions covering each of the basic elements in this program, and is the sole person authorized to amend these instructions. This company has expressly authorized the Safety Officer to halt any operation of the company where there is a danger of serious personal injury. This policy includes respiratory hazards.

Contents of the Powered Industrial Trucks Program

1. **Written Program.**
2. **Training Program.**
3. **Operations Program.**
4. **Configuration Program**.

Nowland Associates, Inc.
Powered Industrial Trucks Program

1. Written Program. Nowland Associates, Inc. will review and evaluate this standard practice instruction when any of the following occurs:

- On an annual basis.
- When changes occur to governing regulatory sources that require revision.
- When changes occur to related company procedures that require a revision.
- When facility operational changes occur that require a revision.
- When there is an accident or close-call that relates to this area of safety.
- Anytime the procedures fail.

1.1 Effective implementation of this program requires support from all levels of management. This written program will be communicated to all affected personnel. It encompasses the total workplace, regardless of the number of workers employed or the number of work shifts. It is designed to establish clear goals and objectives.

2. Training Program. Only trained and authorized operators shall be permitted to operate a powered industrial truck. All operator training and evaluation shall be conducted by persons who have the knowledge, training, and experience to train powered industrial truck operators and evaluate their competence. Training will be a combination of formal classroom, practical demonstrations, and hands-on operator demonstrations. Employees will be trained in accordance with the following guidelines.

2.1 The company Safety Administrator, individual supervisor, or select qualified trainers, (once trained) will have the authority to provide training on the operation of powered industrial trucks.

2.2 Employees of Nowland Associates, Inc. will not operate a powered industrial truck (PIT) unless they have received training in accordance with this standard practice instruction and 29 CFR 1910.178.

2.3 Personnel rotated within the company will have their training verified prior to being allowed to operate a PIT.

2.4 Employee personnel records will be annotated with the date, title, and specifics of said training.

2.5 Any employee who refuses such training will not be permitted to operate a PIT.

2.6 Trainees may operate a powered industrial truck only:

2.6.1 Under the direct supervision of persons who have the knowledge, training, and experience to train operators and evaluate their competence; and

2.6.2 Where such operation does not endanger the trainee or other employees.

2.7 **Training Content.**

2.7.1 Training shall include at least the following: load capacities, instructions, distances, refueling, ramps, visibility and balancer, and counterbalances, as applicable.

2.8 Retraining shall be provided for all operators:

2.8.1 Refresher training in relevant topics shall be provided to the operator when:

2.8.2 The operator has been observed to operate the vehicle in an unsafe manner;

2.8.3 The operator has been involved in an accident or near-miss incident;

2.8.4 The operator has received an evaluation that reveals that the operator is not operating the truck safely;

2.8.5 The operator is assigned to drive a different type of truck; or

2.8.6 A condition in the workplace changes in a manner that could affect the safe operation of the truck.

2.8.7 Every three years

2.9 **Avoidance of Duplicative Training.** If an operator has previously received training in a topic specified in paragraph 29 CFR 1910.178, and such training is appropriate to the truck and working conditions encountered, additional training in that topic is not required if the operator has been evaluated and found competent to operate the truck safely.

2.10 Retraining shall reestablish employee proficiency and introduce new or revised control methods and procedures, as necessary.

2.11 **Certification.** This employer shall certify that employee training has been accomplished and is being kept up to date. The certification shall contain each employee's name and dates of training and any other information as required.

3. Operations Program.

3.1 Trucks shall not be driven up to anyone standing in front of a fixed object.

3.2 No person shall be allowed to stand or pass under the elevated portion of any truck, whether loaded or empty.

3.3 Unauthorized personnel shall not be permitted to ride on powered industrial trucks. A safe place to ride shall be provided where riding of trucks is authorized.

3.4 Arms or legs are prohibited from being placed between the uprights of the mast or outside the running lines of the truck.

3.5 When a powered industrial truck is left unattended, load engaging means shall be fully lowered, controls will be neutralized, power shut off, and brakes set. Wheels will be blocked if the truck is parked on an incline.

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

3.5.2 When the operator is dismounted and within 25 ft. of the truck still in his view, the load engaging means will be fully lowered, controls neutralized, and the brakes set to prevent movement.

3.6 A safe distance shall be maintained from the edge of ramps or platforms while on any elevated dock, platform, or freight car. Trucks will not be used for opening or closing freight doors.

3.7 Brakes will be set and wheel blocks in place to prevent movement of trucks, trailers, or railroad cars while loading or unloading. Fixed jacks may be necessary to support a semitrailer during loading or unloading when the trailer is not coupled to a tractor. The flooring of trucks, trailers, and railroad cars will be checked for breaks and weakness before they are driven onto.

3.8 The operator will ensure sufficient headroom under overhead installations, lights, pipes, sprinkler system, etc. before operating the vehicle in these areas.

3.9 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, but not to withstand the impact of a falling capacity load.

3.10 A load backrest extension will be used whenever necessary to minimize the possibility of the load or part of it from falling rearward.

3.11 Only approved industrial trucks will be used in hazardous locations.

3.12 Whenever a truck is equipped with vertical only, or vertical and horizontal controls elevatable with the lifting carriage or forks for lifting personnel, the following additional precautions will be taken for the protection of personnel being elevated.

3.12.1 Use of a safety platform firmly secured to the lifting carriage and/or forks.

3.12.2 Means shall be provided whereby personnel on the platform can shut off power to the truck.

3.12.3 Such protection from falling objects as indicated necessary by the operating conditions will be provided.

3.13 Fire aisles, access to stairways, and fire equipment will be not be obstructed at any time.

3.14 **General Requirements.** Operators:

3.14.1 Powered industrial truck operators must be competent to operate the equipment safely. A "competent" operator has the necessary education/knowledge, training and experience to safely perform the job.

3.14.2 Will obey Plant/Site speeds and other traffic regulations at all times.

3.14.3 Will operate loaded trucks with forks no more than 6-8 inches above the ground, with the load carried low and tilted back.

3.14.4 Will not raise or lower loads while moving.

3.14.5 Will not carry anything on the overhead guard.

3.14.6 Will use all plant/Site observation mirrors

3.14.7 Will ensure vehicle sound/illuminated warning devices are operational.

3.14.8 Will yield right of way to pedestrians, emergency vehicles, and avoid pedestrian lanes.

3.14.9 Will drive cautiously on uneven or slippery surfaces.

3.14.10 Will ensure the load is pointed uphill where the gradient is greater than 10 percent.

3.14.11 Will ensure fire protection equipment is carried with the vehicle and is in proper working order.

3.15 **Prestart Requirements.** Operators:

3.15.1 Industrial trucks shall be examined before being placed in service, and shall not be placed in service if the examination shows any condition adversely affecting the safety of the vehicle. Such examination shall be made at least daily. Where industrial trucks are used on a round-the-clock basis, they shall be examined after each shift. Defects when found shall be immediately reported and corrected. The operator will verify that all brakes, controls, gauges, lights, seat belts, and routine operational features are in proper working order. They shall be examined before and after each shift. Defects, when found, shall be immediately reported and corrected.

3.15.2 Will remove the truck from service any time it is found to be in need of repair, defective, or in any way unsafe, the truck will be taken out of service until it has been restored to the safe operating condition.

3.15.3 Will check for leaks and perform necessary operator maintenance before starting the vehicle.

3.15.4 Will report deficiencies to maintenance.

3.15.5 Will ensure they know the load capacity and stay within it.

3.15.6 Will be cognizant of the planned route and aware of areas with inadequate headroom, lighting, obstructions, and floor surface problems.

3.15.7 Will wear the same level of personal protective equipment as the personnel they are directly working with.

3.15.8 Will not engage in stunt driving or horseplay.

3.15.9 Will slow down on wet and slippery floors.

3.15.10 Will properly secure dock board or bridgeplates before they are driven over. Dockboard or bridgeplates will be driven over carefully and slowly and their rated capacity never exceeded.

3.15.11 Will approach any elevators slowly and then enter squarely after the elevator car is properly leveled. Once on the elevator, the controls shall be neutralized, power shut off, and the brakes set until the desired level is reached.

3.15.12 Motorized hand trucks must enter elevators or other confined areas with load end forward.

3.15.13 Running over loose objects on the roadway surface shall be avoided.

3.15.14 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.

3.15.15 Will use extreme care tilting the load forward or backward, particularly when high tiering. Tilting forward with load engaging means elevated shall be 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 or stack. When stacking or tiering, only enough backward tilt to stabilize the load shall be used.

3.16 **Loading/Unloading Requirements.** Operators:

3.16.1 Will ensure load is within the trucks rated capacity.

3.16.2 Will place load squarely on forks until load touches carriage.

3.16.3 Will ensure load is stable and centered on forks and stack or tie loose or uneven loads (or ensure proper personnel accomplishes this prior to loading).

3.16.4 Will secure the vehicle when not in use to prevent unauthorized personnel from operating the vehicle.

3.16.5 Will tilt the mast back to lift load.

3.16.6 Will proceed straight into trailers or railcars to load/unload.

3.16.7 Will ensure if loading/unloading onto trucks that the wheels are chocked, brakes are engaged, and loading platform is positioned properly.

3.16.8 Will ensure if loading/unloading onto or from racks the proper safe weight or height-to-load ratio is maintained.

3.16.9. Will ensure if loading/unloading onto or from stacked materials the proper safe weight or height-to-load ratio is maintained.

3.17 **Parking Requirements.** Operators:

3.17.1 Must select flat parking surfaces, away from traffic where the vehicle does not block, doors, pedestrian routes, aisles, exits, etc.

3.17.2 Must not leave a truck unattended or be more than 25 feet from the vehicle without:

3.17.2.1 Fully lowering load-engaging means, neutralizing controls, shutting off power, setting the brakes, and removing the keys.

3.17.2.2 Blocking the wheels if parked on an incline.

3.18 **Refueling Requirements.** Operators:

3.18.1 Refuel only in assigned, ventilated areas containing no ignition sources.

3.18.2 Turn off engine.

3.18.3 Have fire suppression and cleanup equipment available.

3.18.4 Extinguish smoking materials.

3.18.5 Use acid-resistant material-handling equipment and wear corrosion-resistant PPE during battery charging/changing.

3.18.5.1 Remove battery cap slowly and leave open.

3.18.5.2 Pour acid into water, not water into acid.

3.18.6 Follow the vehicle manufacturer's instructions for gas or propane fueling.

3.18.7 Never use an open flame to check fuel level.

3.18.8 Try to prevent spills, clean any spills promptly, replace fuel cap before starting or moving the vehicle.

3.18.9 Take empty propane tanks to an authorized compressed gas container disposal/storage area and follow company policy for disposal/storage.

3.19 **Spilled Electrolyte.** Facilities shall be provided for flushing and neutralizing spilled electrolyte, for fire protection, for protecting charging apparatus from damage by trucks, and for adequate ventilation for dispersal of fumes from gassing batteries.

3.20 **Battery Maintenance Requirements.** A conveyor, overhead hoist, or equivalent material handling equipment shall be provided for handling batteries. Reinstalled batteries shall be properly positioned and secured in the truck. A carboy tilter or siphon shall be provided for handling electrolyte. When charging batteries, acid shall be poured into water; water shall not be poured into acid. Trucks shall be properly positioned and brake applied before attempting to change or charge batteries. Care shall be taken to assure that vent caps are functioning. The battery (or compartment) cover(s) shall be open to dissipate heat. Smoking shall be prohibited in the charging area. Precautions shall be taken to prevent open flames, sparks, or electric arcs in battery charging areas. Tools and other metallic objects shall be kept away from the top of uncovered batteries.

4. Configuration program.

4.1 No modifications or additions which affect capacity and safe operation shall be performed without the manufacturers prior written approval. Capacity, operation, maintenance instruction plates, tags, or decals shall be changed accordingly.

4.2 If the truck is equipped with front-end attachments other than factory installed attachments, the truck will be marked to identify the attachments and show the approximate weight of the truck and attachment combination at maximum elevation with load laterally centered.

4.3 All nameplates and markings will be verified as being in place and maintained in a legible condition.

4.4 When it is needed to determine a proper configuration to purchase a powered industrial truck, Nowland Associates, Inc. will adhere to the following guidelines. The atmosphere or location where the truck will be used will have to be classified as to whether it is hazardous or nonhazardous prior to the consideration of the type industrial truck to be purchased. 29 CFR 1910.148 and the proposed manufacturer should be consulted to determine the most suitable vehicle. The following is a list of designation types.

4.4.1 D designated units are diesel powered units.

4.4.2 DS designated units are diesel powered units that are provided with additional safeguards to the exhaust, fuel and electrical systems.

4.4.3 The DY designated units are diesel powered units that have all the safeguards of the DS units and in addition, do not have any electrical equipment including the ignition and are equipped with temperature limitation features.

4.4.4 The E designated units are electrically powered units that have minimum acceptable safeguards against inherent fire hazards.

4.4.5 The ES designated units are electrically powered units that, in addition to all of the requirements for the E units, are provided with additional safeguards to the electrical system to prevent the emission of hazardous sparks and to limit surface temperatures. They may be used in some locations where the use of an E unit may not be considered suitable.

4.4.6 The EE designated units are electrically powered units that have, in addition to all of the requirements for the E and ES units, the electric motors and all other electrical equipment completely enclosed. In certain locations, the EE unit may be used where the use of an E and ES unit may not be considered suitable.

4.4.7 The EX designated units are electrically powered units that differ from the E, ES, or EE units in that the electrical fittings and equipment are so designed, constructed and assembled that the units may be used in certain atmospheres containing flammable vapors or dusts.

4.4.8 The G designated units are gasoline powered units having minimum acceptable safeguards against inherent fire hazards.

4.4.9 The GS designated units are gasoline powered units that are provided with additional safeguards to the exhaust, fuel, and electrical systems. They may be used in some locations where the use of a G unit may not be considered suitable.

4.4.10 The LP designated unit is similar to the G unit except that liquefied petroleum gas is used for fuel instead of gasoline.

4.5 **Organic Atmospheres.** Power-operated industrial trucks operated by this company shall not be used in atmospheres containing hazardous concentration of acetylene, butadiene, ethylene oxide, hydrogen (or gases or vapors equivalent in hazard to hydrogen, such as manufactured gas), propylene oxide, acetaldehyde, cyclopropane, diethyl ether, ethylene, isoprene, or unsymmetrical dimethylhydrazine (UDMH). See table N-1, 29 CFR 1910.178.

4.6 **Metal Dust Atmospheres.** Power-operated industrial trucks shall not be used in atmospheres containing hazardous concentrations of metal dust, including aluminum, magnesium, and their commercial alloys, other metals of similarly hazardous characteristics, or in atmospheres containing carbon black, coal or coke dust except approved power-operated industrial trucks designated as EX may be used in such atmospheres. See table N-1, 29 CFR 1910.178.

4.7 **Other Hazardous Atmospheres.** Power-operated industrial trucks used by this company shall be used only in areas approved for their use. Operating areas shall be evaluated for hazards prior to operations in these areas are approved.