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Powered Vehicle Operation

1.0 Purpose

1.1 This procedure was developed to ensure that safeguards are in place and the hazards and safe operating procedures associated with the operation of powered industrial trucks are properly communicated to operators of such equipment. This information is to be provided to all powered industrial truck operators and candidates by means of formal and practical training. It also ensures that only competent employees will be assigned work requiring the operation of a lift truck.

1.2 The definition of a competent/qualified operator is one who knows not only how to operate that particular class of powered lift truck's) to which he/she has been assigned, but also knows the hazards associated with the work he/she has been asked to do and how to operate the truck's) in a manner that protects his or her own safety and the safety of others in the workplace. If a medical condition affects a worker's ability to operate a powered lift truck safely around other workers, he/she should not be assigned to operate this equipment.

2.0 Scope

This policy includes all Waupaca Foundry, Inc., Inc. properties where Powered Vehicles are in use.

3.0 Definitions

3.1 Powered Industrial Truck: a mobile powered driven vehicle used to carry, push, lift, stack or tier material. Examples of powered industrial trucks are: High lift trucks, Counterbalance trucks, Cantilever trucks, Rider trucks, Forklift trucks, High lift platform trucks, Low lift platform trucks, Low lift trucks, Motorized hand trucks, Pallet trucks, Narrow aisle rider trucks (Raymond lift), Straddle trucks, Reach rider trucks, Single side leader rider trucks, High lift order picker rider trucks, Motorized hand/rider trucks, Counter balanced front/side loader lift trucks.

3.2 Trainer / Knowledgeable Person: a person with requisite knowledge, training or experience to deliver powered industrial truck training to operators.

3.3 Approved Industrial Truck: a truck that is listed or approved for fire safety purposes for the intended use by a nationally recognized testing laboratory, using nationally recognized testing standards.

3.4 Trainee: an employee who has never been trained or licensed by the Company to operate a powered industrial truck, who is engaged in the process of being trained.

3.5 Personnel Carrier: powered-riding carts used solely for the purpose of transporting personnel and their tools.

4.0 Knowledge and Skills Required to be "Competent"

4.1 Knowledge

A "competent" operator knows and understands the following Safe Operating Rules:

4.1.1 The hazards associated with the work, including the principles of operation and features of the lift truck, workplace conditions and environment, and activities that pose actual or potential danger to health and safety in the workplace; the operator shall use a truck approved for specific hazardous atmospheres in hazardous locations.

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4.1.2 Lift truck classifications & designations; lift truck stability triangle/trapezoid; what is meant by load centers; center of gravity of a load; longitudinal and lateral stability, center of gravity of lift truck; effects of speed, acceleration, sharp cornering, height, attachment; grade/ramps and load security; operator blind spots associated with the design of the lift truck (components, permanent equipment, attachment); the main components of the lift truck with emphasis on the lifting/handling systems and their basic functions; the factors affecting stability, reach/retract, counterbalance principles, tilt; the location of the capacity plate and the information outlined on the plate - model/serial number, capacity rating at a given load center @ a given height, maximum lifting height of forks/attachment, truck weight & minimum battery weight.

4.1.3 Dangerous Activity - a competent operator understands the dangers of: operating with restricted visibility (blind spots, corners, intersections); parking a vehicle on an incline; not stopping before entering an incline; traveling over railroad tracks; allowing riders unless equipped with an additional seat; permitting anyone to stand/walk under loads or ride on loads; not keeping all parts of the body inside the operators compartment at all times; traveling with a load lifted greater than 6" above the floor; dragging the forks when inserting or withdrawing them from a load; increasing the capacity of the truck or overloading the truck; stunt driving and horseplay; allowing anyone to stand on the forks or climb on the upright assembly; driving up to someone in front of a fixed object (e.g. wall, bench); moving a load with someone "steadying it"; jumping from the lift truck in the event of a tip over; uneven surfaces; mast not tilted back far enough to stabilize the load.

4.1.4 Dangerous Conditions - a competent operator understands the dangers of: Explosive atmospheres, operating on a slippery surface (floor, ramps, dock plate etc.); the accumulation of exhaust emissions (carbon monoxide) in restricted spaces such as railroad cars, trucks, etc.; operating with restrictions such as overhead equipment and/or other obstructing stationary building structures; pedestrian traffic along the path of the travel route; workplace noise; inadequate lighting; other vehicular traffic.

4.1.5 The manufacturer's specifications related to the operation and safe load handling for the class or type of truck(s) he/she will be operating.

4.1.6 Where to access the operator manual; the operating information outlined in the manual; the pre-operational and maintenance tasks described in the operator manual.

4.1.7 The procedures and practices for ensuring worker safety that are specific to the workplace.

4.1.8 Is aware of and abides by the company rule regarding use of the seatbelt while operating the vehicle.

4.2 Skills

A "competent" operator must be able to perform the following procedures in a manner consistent with the competency standards using the device he/she will be assigned and under typical workplace conditions:

4.2.1 Pre-operational inspection / check

A competent operator: Carries out a visual inspection of the truck & its attachments prior to operation to ensure that all are in good operating condition, using the daily checklist. If any deficiencies are found the vehicle maintenance garage shall be contacted immediately; also, follow recommended procedures for daily inspection of oil and water levels. All repairs shall be made by an authorized and trained person.

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4.2.2 Start up and Shut down

A competent operator: Uses the correct mounting procedure into the driver's seat; assumes the appropriate driving position; secures the safety restraint belt and keeps in place during operation, ensures transmission/directional control lever in "Neutral"; ensures parking brakes are applied; activates start button/switch; and ensures the warning system (horn/lights) are operating properly. Operators shall only activate the start button/switch with the engine compartment closed, and while they are positioned in the operator seat.

4.2.3 General operation - stopping, starting, turning, driving forward and in reverse, parking, and operating around personnel. A competent operator:

4.2.3.1 Starting, Stopping, Turning: Starts & stops safely with and without a load; allows sufficient room for turning corners; operates @ low speed when turning; uses appropriate steering techniques when turning in confined/limited areas 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 moderated, even rate.

4.2.3.2 Shutdown/Parking: Brings the truck to a complete stop, sets the parking brake, returns transmission/directional control lever to "neutral"; lowers forks to the ground, tilts them forward; uses appropriate shut down procedures & turns off power supply; chocks wheels if risk of truck moving. When the truck is left "unattended" power shall be shut off and brakes set. (Unattended is when the operator is 25 feet or more away from the truck & still in view of the truck, or when the operator is not in view of the truck. A truck shall not be left idling for more than 2 minutes, as this may cause an unnecessary buildup of carbon monoxide in the area.

4.2.3.3 Forward/ Reverse driving on level ground: Keeps all body parts inside the operators compartment @ all times; ensures clear visibility in the intended direction of travel; if visibility is restricted, drives the truck in reverse or asks to be guided; keeps the load-engaging means or the load itself low (usually within 6" of floor) and tilted backward; keeps safe operating distance from other lifting devices, pedestrians, machinery; observes traffic management rules established by WF; drives @ an appropriate speed, taking into consideration the type of device, the load, the pedestrian traffic along the travel route, any obstructions, and the condition of the driving surface; adjusts the fork arms and/or attachments appropriately to maintain stability; observes weight restrictions for floors & elevators; takes appropriate action when meeting restrictions such as overhead equipment and/or other obstructing stationary structures.

4.2.3.4 Forward/Reverse driving on inclines, ramps, or uneven terrain: When not carrying a load, travels forward down an incline, and in reverse up the incline; when carrying a load, travels in reverse down an incline, and travels forward up an incline; ensures that there is sufficient clearance for the lift truck, operator and load prior to traveling on an incline or uneven terrain; does not turn the truck around on a ramp or incline; drives at appropriate speed taking into consideration the effects of gradient on the truck and load security; approaches the grade straight & not at an angle; operates in gear; ensures visibility is clear in the direction of travel; verifies that the incline does not exceed the maximum permissible slope. Railroad tracks shall be crossed diagonally when possible.

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4.2.3.5 Operating around personnel: Always faces in the direction of travel; when turning ensures no personnel are within the truck's danger zone; observes the WF guidelines for ensuring pedestrian safety; if stopped @ an intersection, does not move until eye contact is made with personnel @ the intersection; maintains safe distance from the personnel. Operators may not wear dark or mirrored glasses as they must be able to maintain eye contact with pedestrians at all times. The operator shall also use the horn to warn pedestrians and other vehicles at cross aisles, and blind intersections. The competent operator understands that No Horseplay is allowed with the power operated vehicle.

4.2.3.6 Operating in the area of hot metal carriers: Forklift's may not travel under the hot metal carriers. If they are to be working in an area around or in the path of the hot metal carrier they must make contact with the hot metal carrier operator in advance to notify them of their position.

4.2.4 Load Handling - selection and security of loads, pick up and placement, personnel lifting, stacking and de-stacking

4.2.4.1 Selection of Loads: A competent operator: assesses the weight distribution of the load and identifies limitations of the structures where the load has to be placed; ensures that load is within the rated capacity for the device, taking into account the job to be done; checks forks to ensure that they are safe to use with respect to the capacity rating.

4.2.4.2 Load pick up and Placement: A competent operator: checks the overhead clearance; ensures truck safe distance from any live power lines; engages at least 2/3 of the load length to be lifted and centers the load evenly on the forks; adjusts the tilting angle of the mast, height of fork arms and reach extension to stabilize the load; does not drag the forks when inserting or withdrawing them from a load; does not raise or lower loads while truck is in motion. If the load being carried obstructs forward view, the operator shall travel with the load trailing.

4.2.4.3 Load security & integrity: Observes the limits for freestanding stack height; makes sure the load is secure & balanced before lifting

4.2.4.4 Stacking & unstacking: Is able to stack safely the particular types of loads encountered in this workplace (core racks, patterns, castings & skids); ensures that pallets or skids are safe to be moved & stored - for example, ensures no broken runners or legs.

4.2.4.5 Operators must be able to see a clear line of vision when moving racks, dunnage, or any other load. They may not look through racks to see where they are going, or around racks to see the path of operation. If their view is obstructed, they must travel in reverse.

4.2.4.6 Pallets, or other dunnage that must be banded securely may be stacked as high as the top of the mast, but when stacked high enough to obstruct the operators forward view it must be transported in reverse.

4.2.4.7 Racks empty or full may be transported no more than two high and in reverse only, except for short distances when stacking.

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4.2.4.8 Transport of racks, tubs, dunnage full or empty, should be in reverse whenever possible, exception would be when staging at workstations and loading docks.

4.2.4.9 Personnel lifting, lowering & supporting: The operator ensures lift truck meets prescribed requirements including:

Platforms used to lift personnel must be specifically designed and approved by an engineer, and approved by the lift manufacturer for the purpose it will be used. The platform must have a guardrail, appropriate fall protection or fall arrest measures if it is to be elevated. The platform must be secured to the mast. The lift operator should raise & lower the platform to test its operation before allowing anyone on it; ensure the person on the platform is secured, keep the upright in a vertical position; remain at the controls at all times while a person is on the platform and not travel with personnel on the platform.

4.2.5 Loading and Unloading -- transport vehicles, structures, elevators

4.2.5.1 Loading trucks and railway cars - ensures that the vehicle being loaded is adequately restrained to prevent movement (ex: wheel chocks on both sides of the trailer or vehicle being unloaded,, dock locks etc.) ;Dock board, or bridge plates shall be properly secured before they are driven over ; inspects floors for stability & integrity; ensures adequate lighting; ensures that the dock/bridge plate is one designed to support the mass of the loaded lift truck & is firmly in position; ensures the trailer is properly supported by a jack stand if not attached to a tractor and less than 30 feet in length. (Ref. DWI Customer Service 01005) Trucks shall not be used for opening and closing freight car doors. A safe distance shall be maintained from the edge of ramps or platforms while on any elevated dock, platform, or freight car.

4.2.5.2 Vehicle Restraint - All Waupaca Foundry, Inc. loading/unloading docks that are used by Waupaca Foundry, Inc. employees shall be equipped with permanent fixture restraints such as dock locks. New dock installation must include permanent fixture restraints in the design and construction.

4.2.5.3 Unloading - verifies that the structure where the load has to be placed is able to carry the weight of the load; when stacking loads, does not block access to fire extinguishers, exits or stairways; ensures the load at the bottom is secure and leveled; tilts load forward; exits with forks level.

4.2.5.4 Verifying trailer wheel location - Waupaca Foundry employees must ensure the rear tandem wheels on any trailer to be loaded, are slid to their rearmost position prior to any loading or unloading. If the trailer wheels are not slid all the way back by the truck/trailer operator prior to the loading or unloading of the trailer, the WF employee will instruct the driver of the truck/trailer this is a requirement.

If the operator of the truck/trailer is unable to move the trailer wheels, the truck driver must inform the WF loader of this condition.

The WF powered vehicle operator will communicate to the shipping office, the truck company name and trailer number, and the name of the driver.

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Waupaca Foundry shipping personnel will contact the trucking company to make them aware of the unit number with the defective or nonconforming equipment.

The trailer will not be loaded until a repair has been made allowing the rear tandem wheels to be positioned correctly.

4.2.6 Operational Maintenance - refueling, recharging (where appropriate)

4.2.6.1 Refueling and recharging: Follows the manufacturer's requirements and employers procedures for safe refueling and recharging of lift trucks including: wearing appropriate PPE, including eye protection; properly positioning and securing vehicle; observing precautions with respect to fire (ie: no open flame).

4.2.6.2 Battery Charging and Service:

4.2.6.2.1 Battery charging installations shall be located in areas designated for that purpose. Battery racks used to support batteries must be made of spark- resistant materials or be coated or covered to prevent spark generation.

4.2.6.2.2 Where employees are adding water to the cells, eye wash facilities must be available in the area. Eyewash facilities having a minimum of 15 minute flushing duration shall be available. As recommended by the manufacturer, eyewash solution will be changed or additives added to ensure water quality.

4.2.6.2.3 Where batteries are serviced, facilities shall be provided for:

Flushing and neutralizing of spilled electrolyte

Fire protection

A barrier to prevent the truck from damaging the charging apparatus

Adequate ventilation and dispersal of fumes generated by the battery charging process

4.2.6.2.4 Where the potential for employee exposure to battery electrolyte exists from battery servicing or maintenance, eyewash and body flushing provisions shall be available. Additionally in such areas personal protective equipment to include face shield, apron, long sleeves and rubber gloves must be available for use.

4.2.6.2.5 A hoist or other equivalent material handling equipment shall be provided for handling batteries.

4.2.6.2.6 When charging batteries, acid shall be poured into water, water must not be poured into the acid - as it overheats and splatters.

4.2.6.3.7 **SMOKING / OPEN FLAMES ARE PROHIBITED IN THE CHARGING AREA.** Signs shall be posted in the area with this warning.

4.2.6.3.8 In situations that the batteries are being charged while still on the truck, care shall be taken to assure that vent caps are functioning. The battery (or compartment cover's) shall be open to dissipate heat.

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5.0 Training

5.1 First time driver training

Initial driver training will be provided by a Waupaca Foundry, Inc. trainer, or an outside contractor designated by the plant to have knowledge, training and experience with regard to power vehicle operations, and the evaluation of potential operators. Operators must be a minimum of 18 years of age.

5.1.1 15 minutes Introduction, Major causes of lift truck accidents

5.1.2 60 minutes Lift truck fundamentals, Lift truck balance, Stability and capacity, Pre-operation inspection, safety guidelines for operating lift trucks, Safe load handling techniques, refueling and recharging LP fuel and electric trucks.

5.1.3 Operating instructions, warnings and precautions for the type of truck the operator will be authorized to operate, differences between the truck & automobile, truck controls & instrumentation, engine and motor operation, steering & maneuvering, visibility, fork blades & attachments, operation and use limitations, vehicle capacity, stability and inspection or maintenance to be performed by the operator (daily truck inspections),

5.1.4 Workplace Related Topics: Surface conditions in/out plant, composition of loads to be carried & load stability, stacking/un stacking, pedestrian traffic, narrow aisles & other restricted areas, hazardous locations of operation, ramps or other sloped surfaces that may affect stability. Poorly ventilated areas with potential of CO build up, or diesel exhaust. 15 minutes. Awareness of DOT and workplace related topics (including Waupaca Foundry, Inc. policy)
A quiz to evaluate the trainee knowledge of the classroom instruction.

5.1.5 The classroom training will be followed by a driving demonstration by the instructor, as well as individual driver evaluations on the obstacle course designed to simulate WF situations. This will be conducted in an area designated for training.

5.2 Refresher Currency training

Employees with a valid license will be required to attend refresher training every 3 years. Refresher training will include a review of safe operating procedures, DOT guidelines, and a quiz to ensure understanding of information. An evaluation of the operators driving skills will also be completed at that time. All employees are given a safety talk regarding forklift safe operating rules, and pedestrian safety rules annually.

5.3 Retraining

Employees will be required to complete retraining in the following situations in order to maintain licensing:

1. Operator is observed operating the vehicle unsafely.
2. Operator is involved in an accident / near miss incident and is found to have been operating unsafely
3. Operator is evaluated and it is revealed that the operator is not operating the truck safely.
4. Operator is assigned to drive a different type of industrial truck.
5. Conditions in the workplace change in a manner that could affect safe operation of the industrial truck.

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5.4 Documentation of Training

All operator training shall be documented and include the operators name and clock number, the date of training and driving evaluation, the instructor, the specific type of equipment the employee is authorized to operate, if DOT training was completed and an expiration date 3 years following the training completion. Training will be tracked within the AS400 database. Entry of an employee's name into the AS400 database represents a confirmation by Waupaca Foundry, Inc. that the minimum training requirements have been met or exceeded and the employee is qualified for the job.

6.0 Department of Transportation (DOT) Training Requirements

A. All employees who load, unload or prepare hazardous materials to be transported or shipped in commerce must receive additional training. This training must be provided to industrial truck operators who load or unload hazardous materials at shipping and receiving docks. Training must be provided initially prior to assignment.

Refresher training and licensing for these employees shall be provided every three (3) years.

B. Training Content

1. Requirements of the Hazardous Materials Transportation Uniform Safety Act (HMTUSA) to include:

- a) General awareness information.
- b) Recognition and identification of hazardous materials.
- c) Explanation of DOT labeling, placards, hazardous materials classification systems.

2. Function specific training related to employees job function where applicable, to include:

- a) Executing haz-mat shipping papers.

3. Emergency spill response training to include:

- a) Measures employee must take to initiate plant response action and to protect against hazardous material exposure and incident reporting. (See 9.0)
- b) Methods and procedures for avoiding accidents, such as proper handling of materials.

4. Driving training to include:

- a) Loading & unloading of hazardous materials, including load security, compatibility, and segregation of cargo of mixed load.
- b) Package handling methods.

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7.0 Lift Inspections

Daily inspections will be completed on each shift, prior to use, by a licensed driver. Any problems noted on the inspection should be discussed with vehicle maintenance personnel prior to operation of the lift.

Maintenance inspections are completed on each lift according to lift manufacturer recommendations. Records are kept in Vehicle maintenance in regard to the services performed (long or short), the hours on the lift, and the date of completion.

Short service includes air filter service, engine oil change and inspection.

Long service includes all other filters, transmission and engine oil change and inspection. In addition, service is provided as recommended by the manufacturer.

8.0 License Revocation

If an employee is found to be driving unsafely, not following operating procedures as listed above, etc. the license may be revoked.

Employees that are involved in an incident related to forklift operation – ie: near miss and/or employee injury will immediately have their license revoked. An incident investigation will determine the employee's involvement in the incident. After the investigation is completed the plant safety manager will make a determination of the length of the revocation of the employee's license. In most cases, this will be a minimum of 1 week. Employees that have had other revocation periods may permanently have their license revoked. Plant 4, Marinette, uses a point system to determine revocation, and relicensing time frames (HSCWI 3-0038).

Before a license is reinstated the employee must successfully complete "new license" training requirements.

9.0 Spill Response Procedure

To make the task of servicing forklifts easier for everyone all around, the following policy is now in effect:

9.1 When a forklift (or any vehicle) springs a leak of any kind, the operator must cease use of the vehicle and prepare to get it to the vehicle maintenance department or designated area. Further use of the vehicle could cause additional damage.

9.2 The operator must evaluate the extent of the leak. The vehicle can be driven to vehicle maintenance if the leak is a slight drip. Anything worse than a slight drip must be left in place and allowed to leak WITHIN THE DEPARTMENT. Pans or absorbent should be used to minimize the mess and prevent spillage to non-paved areas or drains. If driving the vehicle leaves a visible trail that could easily be followed, than the vehicle must not be driven.

9.3 For those worse leaks, call the Vehicle Maintenance Department to come over and retrieve the broken forklift. If in doubt, call Vehicle Maintenance. They will send someone to the department to give some "first aid" to the forklift to make it movable. They will then move the lift by driving, towing, or lifting. A spare will then be given to the department if one is available.

9.4 All leaking machinery (either delivered by the department or Vehicle Maintenance personnel) must be staged in an area identified to contain the leaking materials while it is initially being looked at. Do not arrive at vehicle maintenance and park it outside...allowing it to leak on the ground! It is possible operators are not immediately aware their vehicle is leaking. If you observe any WF vehicle leaking fluids, LET THE OPERATOR KNOW SO THEY CAN INITIATE THE ABOVE PROCEDURE!

If you have any questions regarding this, contact the Vehicle Maintenance Department.

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10.0 Incidents

Employees involved in incidents with the powered vehicle, whether they result in injury and/or property damage, are required to report them immediately to their supervisor and the Plant Safety Department.

11.0 Forms

HSF 4-0058	Forklift Daily Pre-Shift Inspection Form
HSF 4-0045.W	Performance Checklist for Licensure
HSF 4-0046.WM	Operator Licensure Card
HSF 4-0197.M	Forklift Driver Evaluation (Plant 4- Marinette)