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1. Purpose

University of Alaska Anchorage (UAA) employees, student workers, faculty, staff, and outside contractors who perform work on UAA property may be required to operate powered industrial trucks (PIT). This Powered Industrial Trucks Program is intended to ensure workers are knowledgeable about the hazardous operating powered industrial trucks in order to protect themselves and others.

2. Objective

UAA, in its continuing effort to provide personnel with safe, healthful working conditions, and to comply with the Occupational Safety and Health Act is implementing the following program for powered industrial trucks to protect people working at the University, by helping employees, student workers, faculty, staff, and outside contractors better understand the systems available to better protect themselves.

3. Scope

This policy applies to UAA employees, student employees, faculty, staff, and outside contractors working on UAA powered industrial trucks as part of their work requirements.

4. Definitions

Powered Industrial Truck - any mobile power-propelled truck used to carry, push, pull, lift, stack or tier materials. Examples include fork lifts, pallet jacks, low lift jacks, etc.

5. Authority and Responsibilities

In addition to the roles and responsibilities outlined in the UAA Training Program, the following apply to the Powered Industrial Trucks Program.

EHS/RM

- Develop and periodically review the Powered Industrial Truck Program
- Provide assistance to departments for equipment selection, training, and area hazard determination as requested
- Assist departments with training programs

Supervisor

- Conduct assessments to determine the need for powered industrial trucks and the identification of personnel who will be qualified to operate them
- Ensure the proper PPE is made available to personnel in their department for work with powered industrial trucks

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- Ensure personnel are properly trained in the use of powered industrial trucks in their department
- Conduct periodic observations of powered industrial truck use in their department to verify required procedures are followed
- Ensure proper maintenance of equipment is performed
- Maintain required documentation

Department Safety Coordinator

- Assist in department powered industrial truck hazard identification
- Conduct periodic inspections to identify powered industrial truck hazards in their department
- Notify supervisor when there is a deficiency identified in the program

Employees

- Assess all hazards applicable to operating an industrial truck prior to each job
- Perform pre-operation inspections when required
- Only operate equipment after receiving the proper training for that specific equipment
- Alerts department supervisor when additional hazards are identified, or equipment requires repairs or maintenance

Outside Contractors

- Perform all work in compliance with their company's industrial truck program as approved by the EHS/RM department
- If the company does not have a program, they must comply with this program

6. Hazards

Powered industrial truck hazards at UAA may include the following:

- Severe crushing or struck by injury to self or others working nearby equipment
- Injury resulting from tipping or rolling PIT
- Collisions resulting from hazardous environmental conditions or improper operation
- Risk of falling objects from above to operator or nearby personnel
- Damage to buildings and equipment
- Exposure of emissions or fumes generated by PIT

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7. Engineering Controls

Engineering controls are design plans or changes to the working environment to prevent or reduce personnel exposure to hazards. The following example of engineering controls should be considered to minimize PIT hazards:

- Procurement of safe powered industrial trucks in good working condition
- Preventative maintenance on equipment to prevent malfunction
- Proper use of approved attachments
- Proper design of areas where PITs will be used to ensure a space for safe operation
- Identify and demarcate areas where PITs will be in operation to prevent unauthorized entry

8. Administrative Controls

Administrative controls are safe work practices and procedures designed to reduce the risks associated with workplace hazards. PPE will be implemented as an additional means for protection or only when engineering and administrative controls are not feasible. Examples of administrative controls include the following:

- Train personnel who operate PITs
- Perform routine inspections of PITs to identify defective systems
- Plan jobs to ensure proper PITs are used
- Use other equipment when possible including pallet jacks and carts

9. Procedures

The following procedures will be followed when using Powered Industrial Trucks at UAA:

General Requirements for Powered Industrial Trucks

The following are requirements applicable to all industrial truck use at UAA:

- Only operators trained and authorized on that specific equipment shall be permitted to operate a PIT
- Modifications and additions to PITs will only be performed by the manufacturer or their representative, and capacity, operation, and maintenance instruction plates, tags, or decals shall be modified accordingly
- UAA will only use front-end attachments designed to be used with the make and model of PIT. Confirmation should be received from the vender, and the PIT shall be marked to identify the attachments and indicate the approximate weight of the truck and attachment

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combination at maximum elevation with load laterally centered.

- Nameplates and markings shall legible at all times
- The Department Supervisor and/or their designees will assess the areas in which powered industrial trucks are used within their departments to determine if specialty designed equipment is needed for safe operating. OSHA Standard 29 CFR 1910.178(c) Table N-1 should be used as reference to determine areas which may be designated hazardous locations. If designated locations exist which require specially designed and tested industrial trucks, notify EHS/RM for assistance in determining which type of industrial truck to use
- Any PIT not in safe operating condition shall be removed from service. All repairs shall be performed by a technician certified to perform work on the specific PIT, and the PIT must be returned to the manufacturer's specifications for safe operation prior to use. No PIT shall be put back into service until all repairs have been made.
- Always lower a load as soon as reasonable to approximately four inches off the ground prior to transporting to a new location
- Ensure load is centered, and evenly balance prior to lifting

Pre-Operation Safety Inspection

For each shift prior to operating a PIT, the employee shall perform a pre-operation safety inspection as follows using the appropriate Operator Checklist found in Appendix A:

- The inspection is intended to identify any conditions that could affect the safe operation
- When unsafe condition(s) are observed, the PIT shall be removed from service and tagged "Out of Service" until the proper repairs or concerns are addressed
- The department supervisor must be notified as soon as reasonable and arrangements made to have the PIT repaired by a certified mechanic

Fuel Handling and Storage

The handling and storage of liquid fuels such as gasoline shall be in accordance with the National Fire Protection Association (NFPA) Flammable and Combustible Liquids Code (NFPA 30). The handling and storage of liquefied petroleum gas fuel shall be in accordance with the Storage and Handling of Liquefied Petroleum Gases Code (NFPA 58). The following procedures shall be followed:

- Battery charging installations shall be located in areas designated for that purpose
- When refueling or recharging the batteries of a PIT, the operator shall ensure that the PIT is shut-off and the parking brake is engaged

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- Spill kits be placed at PIT battery charging stations for flushing and neutralizing spilled electrolyte
- Bollards or other protective devices will be installed if needed to protect charging apparatus from damage by trucks;
- Refueling and recharging shall be completed in areas that are designated and well ventilated
- Emergency eyewash are required in the vicinity of PIT battery charging areas
- Smoking is prohibited in refueling and recharging areas
- Battery levels must be check monthly
- When charging batteries, acid shall be poured into water; water shall not be poured into acid

Workplace Hazards

Prior to operating a PIT, personnel shall survey the area and identify hazards they will encounter and prepare to mitigate these hazards. These hazards may include, but are not limited to, the following:

- Overhead obstructions; damage to overhead structures or equipment may cause injury to the operator or other people in the general vicinity. The height of the equipment and the load must be taken into consideration. Common overhead obstructions include:
 - Fire protection sprinkler piping
 - Ventilation ducts
 - Lighting fixtures
 - Power lines.
- Co-workers or pedestrians traveling to and from certain areas within the facility
- Poor housekeeping such as wet floors and debris left on the floor;
- Poor condition of the floor surface such as uneven concrete, potholes and cracks;
- Poor visibility around corners. The operator's view from a PIT can be blocked or obstructed by the load. If there is not a clear view, drive in reverse or have a spotter
- Build up of gasses from PIT exhaust in small areas
- Driving too fast for the conditions of the area

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Tipping

Powered Industrial Trucks are designed and balanced to prevent tipping, however if the PIT is used outside it's designed capacity tipping may occur. Some factors that could cause the PIT to tip over:

- Overloads
- Unstable loads
- Load not centered on forks
- Traveling with the load raised;
- Traveling at excessive speeds
- Sudden stops and starts
- Making sharp turns
- Traveling across a ramp or incline

Safety Practices

The following safety practices shall be adhered to at all times:

- Wear seatbelts whenever the PIT is equipped with them;
- Keep all body parts inside the driver's compartment;
- Drive at appropriate speeds;
- Do not carry passengers on the PIT;
- No person shall be permitted to stand or pass under elevated portions of any PIT, whether loaded or empty;
- When traveling behind other PITs or vehicles, always maintain at least three PIT lengths from the vehicle or PIT ahead, and maintain control of the PIT at all times;
- Slowly approach ramps and inclines straight, not at an angle;
- Never turn the PIT while on a ramp or incline;
- When parking a PIT and prior to dismounting or leaving the unit, shut-off the power. The operator shall never leave a running PIT unattended;
- When the PIT is left unattended, the load shall be fully lowered, controls shall be neutralized, power shut off, brakes set and wheels blocked if PIT is parked on an incline;
- Never park a PIT in front of any fire protection equipment, emergency exits, or in a manner that would obstruct a person from exiting the area;

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- If at any time during operation a PIT is found to be in need of repair, defective, or in any way unsafe, it shall be immediately removed from service. The supervisor shall be notified so they can contact the person responsible for the repairs; and

10. Inspections

Inspections of powered industrial trucks should occur:

- Periodically the Department Supervisor shall observe personnel while operating PITs in their department to determine compliance with this program
- For each shift prior to use, the operator will inspect the truck and document using the operator checklist located in Appendix A
- Each PIT must be maintained per manufactures recommendations by a certified technician

11. Training

UAA employees who are required to operate a powered industrial truck must successfully complete PIT training for that specific piece of equipment.

All operator training and evaluation will be performed by a trainer approved by EHS/RM and department supervisor. The PIT trainer must demonstrate they have knowledge, training, and experience to train PIT operators and evaluate their competence. The PIT trainer qualification must be documented and included with training.

Training will consist of:

- Classroom program covering PIT operation, maintenance and hazards
- Observation of safe operation in the work area
- Demonstration of safe PIT operation under the supervision of the trainer, in an area where operation does not endanger the trainee or other employees

The classroom and hands-on demonstration must cover the following for the equipment to be used:

- Pre-Operation Safety Inspection
- Workplace Hazards
- Safe Driving and Operating Procedures
- Loading-Carrying-Unloading of Materials
- Operation and Safety Driving Practical

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Retraining

When the employer has reason to believe that personnel that have already been trained does not have the understanding and skill required to properly adhere to this program they shall be retrained. Retraining should take place in the following conditions:

- Changes in PIT model or attachments is used that render previous training obsolete
- Changes in the procedures or PPE to be used
- Changes in workplace conditions or assignments
- Inadequacies in affected personnel's knowledge of hazardous materials indicate that personnel have not retained the requisite understanding or skill.

12. Program Evaluation

The Powered Industrial Truck Program shall be evaluated on an annual basis utilizing the protocols set forth by EHS/RM. The evaluation team will consist of a department safety coordinator and a designee from EHS/RM. EHS/RM will define the scope of the evaluation. The final report will be developed by the EHS/RM utilizing the information received during the evaluation. The deficiencies determined in the report will be documented and corrective action plans will be developed.

13. References

OSHA and NFPA regulations that apply to electrical safety are included below.

- 29 CFR 1910.178 Powered Industrial Trucks
- NFPA 30 Flammable and Combustible Liquids Code
- NFPA 58 Storage and Handling of Liquefied Petroleum Gases Code

14. Revision History

Revision Number	Date Revised	Description of Change	Revised By	Approved By
0		Initial Issue		
1				
2				
3				

Appendix A-1: OPERATOR CHECKLIST - Internal Combustion Engine Industrial Truck

Inspection Information

Date		Operator	
Truck#		Model#	
Department		Serial#	
Shift		Hour Meter	

Safety and Operational Checklist (Have a qualified person correct all problems.)

Engine Off Checks	OK	FIX
Leaks – Fuel, Hydraulic Oil, Engine Oil or Radiator Coolant		
Tires – Condition and Pressure		
Forks, Top Clip Retaining Pin and Heel – Check Condition		
Load Backrest – Securely Attached		
Hydraulic Hoses, Mast Chains, Cables and Stops – Check Visually		
Overhead Guard – Attached		
Finger Guards – Attached		
Propane Tank (LP Gas Truck) – Rust Corrosion, Damage		
Safety Warnings – Attached (Refer to Parts Manual for Location)		
Battery – Check Water/Electrolyte Level and Charge		
All Engine Belts – Check Visually		
Hydraulic Fluid Level – Check Level		
Engine Oil Level – Dipstick		
Transmission Fluid Level – Dipstick		
Engine Air Cleaner – Squeeze Rubber Dirt Trap or Check the Restriction Alarm (if equipped)		
Radiator Coolant – Check Level		
Operator's Manual – In Container		
Nameplate – Attached and Information Matches Model, Serial Number and Attachments		
Seat Belt – Functioning Smoothly		
Hood Latch – Adjusted and Securely Fastened		
Brake Fluid – Check Level		
Engine On Checks – Unusual Noises Must Be Investigated Immediately	OK	FIX
Accelerator or Direction Control Pedal – Functioning Smoothly		
Service Brake – Functioning Smoothly		
Parking Brake – Functioning Smoothly		
Steering Operation – Functioning Smoothly		
Drive Control – Forward/Reverse – Functioning Smoothly		
Tilt Control – Forward and Back – Functioning Smoothly		
Hoist and Lowering Control – Functioning Smoothly		
Attachment Control – Operation		
Horn, Lights, and Audible Alarms – Functioning		
Cab (if equipped) – Heater, Defroster, Wipers – Functioning		
Gauges: Ammeter, Engine Oil Pressure, Hour Meter, Fuel Level, Temperature, Instrument Monitors – Functioning		

Appendix A–2 OPERATOR CHECKLIST - Electric Industrial Truck

Inspection Information

Date		Operator	
Truck#		Model#	
Department		Serial#	
Shift		Hour Meter	

Safety and Operational Checklist (Have a qualified person correct all problems.)

Motor Off Checks	OK	FIX
Leaks – Hydraulic Oil, Battery		
Tires – Condition and Pressure		
Forks, Top Clip Retaining Pin and Heel – Condition		
Load Backrest Extension – Attached		
Hydraulic Hoses, Mast Chains, Cables & Stops – Check Visually		
Finger Guards – Attached		
Overhead Guard – Attached		
Safety Warnings – Attached (Refer to Parts Manual for Location)		
Battery – Water/Electrolyte Level and Charge		
Hydraulic Fluid Level – Dipstick		
Transmission Fluid Level – Dipstick		
Operator's Manual in Container		
Capacity Plate Attached – Information Matches Model, Serial Number and Attachments		
Battery Restraint System – Adjust and Fasten		
Operator Protection		
Sit-down Truck – Seat Belt – Functioning Smoothly		
Man-up Truck – Fall protection/Restraining means – Functioning		
Brake Fluid – Check level		
Motor On Checks (Unusual Noises Must Be Investigated Immediately)	OK	FIX
Accelerator Linkage – Functioning Smoothly		
Parking Brake – Functioning Smoothly		
Service Brake – Functioning Smoothly		
Steering Operation – Functioning Smoothly		
Drive Control – Forward/Reverse – Functioning Smoothly		
Tilt Control – Forward and Back – Functioning Smoothly		
Hoist and Lowering Control – Functioning Smoothly		
Attachment Control – Operation		
Horn, Lights, and Audible Alarms – Functioning		
Hour Meter – Functioning		
Battery Discharge Indicator – Functioning		
Instrument Monitors – Functioning		