

# UNIVERSITY OF TOLEDO

SUBJECT: POWERED INDUSTRIAL TRUCKS

Procedure No: S-08-046

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## PROCEDURE STATEMENT

All powered industrial truck operators must be licensed through the University of Toledo Environmental Health and Radiation Safety (EHRS) Department.

## PURPOSE OF PROCEDURE

The purpose of this program is to establish requirements and training for work involving the operation of a powered industrial truck to:

- provide a safe working environment;
- govern operator use of powered industrial trucks;
- ensure proper care and maintenance of powered industrial trucks.

This program shall be used in conjunction with other University of Toledo policies and procedures involving the protection of workers in the workplace.

## PROCEDURE

This program applies to all university employees and students who operate powered industrial trucks. A powered industrial truck is an industrial vehicle that pushes, pulls, stacks or tiers loads. Powered industrial trucks include fork trucks, tractors, platform lift trucks, motorized hand trucks, and other specialized industrial trucks powered by electric motors or internal combustion engines. Golf carts and Kubota's are also considered a powered industrial truck.

This standard does not apply to compressed air or non-flammable compressed gas-operated industrial trucks, farm vehicles, or vehicles intended for earth moving or over-the-road hauling.

### Work Site Specific Information

Work site specific information will be gathered and verified by the area supervisor using the site-specific forms found in Appendix B. The following is included:

- surface conditions where the vehicle will be operated;
- composition of loads to be carried and load stability;
- load manipulation, stacking, and un-stacking;
- pedestrian traffic in area where the vehicle will be operated;
- narrow aisles and other restricted places where the vehicle will be operated;
- hazardous (classified) locations where the vehicle will be operated;
- ramps and other sloped surfaces that could affect the vehicle's stability;
- closed environments and other areas where insufficient ventilation or poor vehicle maintenance could cause a buildup of carbon monoxide or diesel exhaust;
- other unique or potentially hazardous environmental conditions in the workplace that could affect safe operation;
- specific controls and instruments for each powered industrial truck on site.

### Vehicle Inspection

Industrial trucks must 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 while in use. Where industrial trucks are used on a round-the-clock basis, they must be examined before each shift. Defects must be reported and corrected immediately prior to the use of the powered industrial truck. The daily vehicle inspection checklist can be found in Appendix C. Vehicle inspections must be retained by the supervisor for six months.

### Maintenance requirements

If at any time a powered industrial truck is found to be defective, in need of repair, or in any way unsafe, the truck shall be taken out of service until it has been restored to safe operating condition. The following procedures also apply:

- The manufacturer's recommended maintenance and lubrication schedule must be followed.
- Modifications and additions which affect capacity and safe operation shall not be performed by the customer or user without manufacturer's prior written approval. Capacity, operation, and maintenance instruction plates, tags, or decals shall be changed accordingly.
- If the truck is equipped with front-end attachments other than factory installed attachments, the user shall request that the truck be marked to identify the attachments and show the approximate weight of the truck and attachment combination at maximum elevation with load laterally centered.
- The user shall see that all nameplates and markings are in place and are maintained in a legible condition.
- All repairs shall be made by authorized personnel.
- No repairs shall be made in hazardous locations.
- Those repairs to the fuel and ignition systems of trucks which involve fire hazards shall be conducted only in locations designated for such repairs.
- Trucks in need of repairs to the electrical system shall have the battery disconnected prior to such repairs.
- All parts of any such industrial truck requiring replacement shall be replaced only by parts equivalent as to safety with those used in the original design.
- Industrial trucks shall not be altered so that the relative positions of the various parts are different from what they were when originally received from the manufacturer, nor shall they be altered, either by the addition of extra parts not provided by the manufacturer or by the elimination of any parts, with the exception of conversion from gasoline to petroleum gas as stated in 1910.178 (q) (12).
- Additional counter weighting of fork trucks shall not be done unless approved by the truck manufacturer.
- Water mufflers shall be filled daily or as frequently as is necessary to prevent depletion of the supply of water below 75 percent of the filled capacity. Vehicles with mufflers having screens or other parts that may become clogged shall not be operated while such screens or parts are clogged. Any vehicle that emits hazardous sparks or flames from the exhaust system shall immediately be removed from service and not returned to service until the cause for the emission of such sparks and flames has been eliminated.
- When the temperature of any part of any truck is found to be in excess of its normal operating temperature, thus creating a hazardous condition, the vehicle shall be removed from service and not returned to service until the cause for such overheating has been eliminated.
- Industrial trucks shall be kept in a clean condition, free of lint, excess oil, and grease. Noncombustible agents should be used for cleaning trucks. Low flash point (below 100 deg. F.) solvents shall not be used. High flash point (at or above 100 deg. F.) solvents may be used. Precautions regarding toxicity, ventilation, and fire hazard shall be consonant with the agent or solvent used.
- Fuel tanks shall not be filled while the engine is running. Spillage shall be avoided.
- Spillage of oil or fuel shall be carefully washed away or completely evaporated and the fuel tank cap replaced before restarting engine.
- No truck shall be operated with a leak in the fuel system until the leak has been corrected.
- Open flames shall not be used for checking electrolyte level in storage batteries or gasoline level in fuel tanks.

### Training

Trainees may operate a powered industrial truck under the direct supervision of persons who have knowledge, training, and experience to train operators and evaluate their competence and where such an operation does not endanger the trainee or other employees. Prior to permitting an employee to operate a powered industrial truck, except for training purposes, supervisors and employees must successfully complete both on-line classroom and hands-on operator evaluations. Only operators passing the powered industrial truck-training course will be permitted to operate a powered industrial truck. The training will be specific for the type of trucks operated and the location they are operated in. The employee will only be authorized to operate those powered industrial trucks for which they have been trained on in the area or location for they have been trained.

Training courses will be provided by the EHRS Department or other designated trainers and is intended for employees who operate powered industrial trucks. The following information will be covered during classroom training:

- the importance of the powered industrial truck program and procedures;
- a summary of the OSHA powered industrial truck standard;
- an overview of the University of Toledo written Powered Industrial Truck Program;
- truck related topics;
- workplace related topics;
- truck operations;
- traveling;
- loading;
- inspection and maintenance.

Hands-on training will be provided by EHRS or other designated trainer. Practical training will include:

- demonstrations performed by the trainer;
- practical exercises performed by the trainee and;
- an evaluation of the operator's performance in the workplace.

After successful completion of the classroom and hands-on training, the employee will be issued a certificate indicating the name of the driver, the date of the training, the name of the instructor, and what type of powered industrial truck the individual is authorized to operate.

Refresher training in relevant topics is required when:

- an operator has been observed to operate the vehicle in an unsafe manner or;
- the operator has been involved in an accident or a near miss or;
- the operator is assigned to a different truck or a new truck is brought into use or;
- the conditions change in an area where the PIT is operated or;
- the operator has received an evaluation that reveals that the operator is not operating the powered industrial truck safely.

### Operator Evaluations

Evaluations must be completed at least once every three years to verify the operator has retained and used the knowledge and skills needed to drive safely. Previous notice is not given. The evaluation will include observation of operation, verbal questioning about safety issues, and signing of the training attendance sheet. This evaluation must be completed by the EHRS hands-on trainer using the form found in Appendix D.

### Accident Reporting

Accident reporting must be completed using the University of Toledo's Accident Investigation report and if needed the University of Toledo's Injury and Illness report if the operator has been involved in an accident or a near-miss incident involving a powered industrial truck.

## APPENDIX A – DEFINITIONS

**DS designated unit:** diesel powered units that are provided with additional safeguards to the exhaust, fuel and electrical systems. They may be used in some locations where a D unit may not be considered suitable.

**DY designated unit:** 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.

**E designated unit:** electrically powered units that have minimum acceptable safeguards against inherent fire hazards.

**ES designated unit:** electrically powered units that, in addition to all the requirements for the E units, are provided with additional safeguards to the electrical system to prevent 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.

**EE designated unit:** electrically powered units that have, in addition to all the requirements for the E and ES units, have 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.

**EX designated unit:** 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.

**G designated unit:** gasoline powered units having minimum acceptable safeguards against inherent fire hazards.

**GS designated unit:** 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.

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

**LPS designated unit:** liquefied petroleum gas 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 an LP unit may not be considered suitable.

**APPENDIX B – SITE SPECIFIC OPERATING INFORMATION**  
(SAMPLE)

Type of Surfaces

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Grades (ramps and other sloped surfaces)

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Pedestrian Traffic

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Narrow Aisles and Other Restricted Places Where Vehicles Will Be Operated

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Hazardous Locations

- Locations in which flammable gases or vapors are, or may be, present in the air in quantities sufficient to produce explosive or ignitable mixtures.
- Locations which are hazardous because of the presence of combustible dust.
- Locations where easily ignitable fibers or flying particles are present but not likely to be in quantities sufficient to produce ignitable mixtures.

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Closed Environments and Other Areas with Potential Carbon Monoxide Build-up

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Other Potentially Hazardous Conditions That Could Affect Safe Operation

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## SITE SPECIFIC LOAD INFORMATION

[illegible]

## SITE SPECIFIC CONTROLS AND INSTRUMENTATION LIST

**Make:** \_\_\_\_\_

**Model:** \_\_\_\_\_

Identification Number: \_\_\_\_\_

**Vehicle Classification:** \_\_\_\_\_

**Vehicle Maximum Capacity:** \_\_\_\_\_

**Vehicle Maximum Lift Height:**\_\_\_\_\_

[illegible]

**APPENDIX C – POWERED INDUSTRIAL TRUCK PRE-OPERATION CHECKLIST**  
(SAMPLE)

**Name:** \_\_\_\_\_

**Date:** \_\_\_\_\_

CHECKS	OK	COMMENTS	CHECKS	OK	COMMENTS
Overhead Guard			Safety Door		
Hydraulic Cylinders			Safety Switch		
Mast Assembly			Hand Guards		
Lift Chains and Rollers			Tow Hook		
Forks			Control Lever		
Tires			Safety Interlock		
Battery Check			Gripper Jaws		
Hydraulic Fluid			Work Platform		
Gauges			Propane Odor		
Steering			Propane Tank		
Brakes			Propane Hose		
Lights			Engine Oil		
Horn			Engine Coolant		
Safety Seat			Transmission Fluid		
Load Handling Attachments			Windshield Wipers		

Other Comments: \_\_\_\_\_

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**APPENDIX C1 – GOLF CART PRE-OPERATION CHECKLIST**  
(SAMPLE)

**AUTHORIZATION**

	<u><b>YES</b></u>	<u><b>NO</b></u>	<u><b>N/A</b></u>
Have you completed training to include specific cart safety instruction?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Do you possess a valid driver's license?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Do not operate carts/utility vehicles on outside roadways except on marked cross walks.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

**INSPECTION**

	<u><b>YES</b></u>	<u><b>NO</b></u>	<u><b>N/A</b></u>
Are tires inflated to the proper pressure?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Is rust damage present?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Are all fluids maintained at the proper levels?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Is there any evidence of fluid leaks?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Are there any loose parts?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Are slow moving vehicle reflective triangles clearly displayed?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Are there any other visibly defective parts?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Is the vehicle steering loose?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Is the audible reverse alarm operational?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Are the brakes functioning properly?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Are the side and rear-view mirrors in good condition?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Are operational flashing hazard lights operational?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Are seat belts accessible for use and in good condition?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Is the horn operational?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Are all signals fully functional?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Is the battery correctly charged?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Are all original equipment safety features maintained in good working order as recommended by the manufacturer's service schedule?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

**Other comments:** \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

**Name:** \_\_\_\_\_  
PLEASE PRINT

**Date:** \_\_\_\_\_

**Signature:** \_\_\_\_\_



**APPENDIX D – POWERED INDUSTRIAL TRUCK OPERATER EVALUATION**  
(SAMPLE)

**Employee:** \_\_\_\_\_ **Date:** \_\_\_\_\_ **Time:** \_\_\_\_\_ am / pm  
PLEASE PRINT

<b><u>Observe the following:</u></b>	<b><u>YES</u></b>	<b><u>NO</u></b>	<b><u>N/A</u></b>
1. Shows familiarity with truck controls.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2. Raised forks before moving the vehicle.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3. Gave proper signals when turning and slowed down at intersections.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4. Sounded horn at intersections and obeyed signs.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
5. Looked over both shoulders before backing up.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
6. Kept a clear view of direction of travel driving backward when required.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
7. Turned corners correctly - was aware of rear end swing.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
8. Yielded to pedestrians.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
9. Drove under control and within proper traffic aisles.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
10. Approached load properly.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
11. Lifted and maneuvered load properly.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
12. Tilted load against the backrest before moving the vehicle.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
13. Traveled with load at proper height.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
14. Forks were not dragging while the vehicle was in motion (they should be raised).	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
15. Lowered load smoothly/slowly.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
16. Stops smoothly/completely.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
17. Load balanced properly and forks under load all the way.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
18. Did not nudge one or more barriers or structures with vehicle or load.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
19. Carried parts/stock in approved containers.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
20. Checked bridge plates/ramps.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
21. Placed loads within marked area.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
22. Stacked loads evenly and neatly.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
23. Checked load weights.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
24. Placed forks on the floor when parked, controls neutralized, brake on set, power off.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
25. Was using the proper safety equipment: shoes, hard hat, etc.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
26. Followed proper instructions for maintenance - checked both at beginning and end.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

**Evaluator's Name:** \_\_\_\_\_  
PLEASE PRINT

**Signature:** \_\_\_\_\_