

Chapter 296-863 WAC

FORKLIFTS AND OTHER POWERED INDUSTRIAL TRUCKS

NEW SECTION

WAC 296-863-10005 Scope. This chapter applies to powered industrial trucks that use electric motors or internal combustion engines. This includes, but is not limited to:

- ✎ Fork trucks.
- ✎ Forklifts.
- ✎ Tractors.
- ✎ Platform lift trucks.
- ✎ Motorized hand trucks.
- ✎ Other specialized industrial trucks.

Definition:

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

Exemption:

This chapter does not apply to:

- ✎ Compressed air-powered industrial trucks.
- ✎ Nonflammable compressed gas-operated industrial trucks.
- ✎ Vehicles covered by chapter 296-307 WAC, Safety standards for agriculture.
- ✎ Vehicles intended primarily for earth moving or over-the-road hauling.

NEW SECTION

WAC 296-863-200 Design, construction, and equipment.

Summary:

Your responsibility:

To make sure PITs are properly designed, constructed, and equipped.

You must:

Design and construction

Make sure PITs meet design and construction requirements WAC 296-863-20005.

Meet these requirements when modifying or altering PITs WAC 296-863-20010.

Labeling

Make sure PITs are properly labeled
WAC 296-863-20015.

Equipment

Protect operators from falling objects
WAC 296-863-20020.

Provide fall protection on order pickers
WAC 296-863-20025.

Provide directional lights when required
WAC 296-863-20030.

Liquefied petroleum gas (LPG) PITs

Make sure liquefied petroleum gas (LPG) fueled PITs meet these requirements

WAC 296-863-20035.

Meet these requirements when converting gasoline fuel PITs to liquefied petroleum gas (LPG) fuel

WAC 296-863-20040.

NEW SECTION

WAC 296-863-20005 Make sure PITs meet design and construction requirements.

You must:

 Make sure PITs meet American National Standards Institute (ANSI) design and construction requirements.

 Make sure PITs manufactured **before** March 1, 2000, meet the requirements of ANSI B56.1-1969, Safety Standards for Powered Industrial Trucks.

 Make sure PITs manufactured **on or after** March 1, 2000, meet the requirements of ANSI B56.1-1993, Safety Standards for Powered Industrial Trucks.

 Make sure rough terrain forklift trucks manufactured on or after January 1, 2005, meet the design and construction requirements of ANSI B56.6-1992, Safety Standard for Rough Terrain Forklift Trucks.

Note: There may be a nameplate on the PIT or a statement in the instruction manual indicating that the PIT meets the requirement of the appropriate ANSI standard. If in doubt, check with the manufacturer.

ANSI B56.1-1993 and B56.6-1992 are available by:

- Purchasing copies by writing:

American National Standards Institute

11 West 42nd Street

New York, NY 10036

OR

- Contacting the ANSI website at www.ansi.org.

NEW SECTION

WAC 296-863-20010 Meet these requirements when modifying or altering PITs.

You must:

Have written approval from the PIT manufacturer before making any modifications to the PIT that:

- Change the relative position of the various parts of the PIT from what they were when originally received from the manufacturer.

- Add extra parts not provided by the PIT manufacturer.
- Eliminate any parts.
- Affect capacity or safe operation.

Exemption: This does not apply to converting PITs from gasoline to LPG fuel.

You must:

 Make sure any modifications or additions to the PIT are shown on the plates, tags, or decals to reflect any changes in the PITs:

- Capacity.
- Operation.
- Maintenance instructions.

NEW SECTION

WAC 296-863-20015 Make sure PITs are properly labeled.

You must:

 Make sure all PIT nameplates as well as any stickers, stencils or marks that relate to the stability and safety of the PIT are:

- In place.
- Legible.

Note: PITs should have a nameplate installed by the manufacturer that contains at least the following information:
- Model and serial number.
- Approximate weight of the PIT.
- Certification that the manufacturer has met the mandatory requirements of ANSI B56.1 Safety Standards for Powered Industrial Trucks.
- Type designation to show the PIT meets the applicable requirements of a nationally recognized testing laboratory.

You must:

 Make sure PITs approved for hazardous (classified) locations have a label or some other identifying mark indicating acceptance by a nationally recognized testing laboratory.

 Make sure PITs with front-end attachments, including fork

extensions, are marked to:

- Identify the attachment.
- Show the approximate combined weight of the PIT and attachment.
- Show the maximum capacity of the PIT with attachments at their highest elevation and the load laterally centered.

NEW SECTION

WAC 296-863-20020 Protect operators from falling objects.

You must:

✎ Use an overhead guard to protect operators from falling objects such as small packages, boxes, and bagged material.

Exemption:

A high lift rider truck may be operated without the guard, providing all of the following conditions are met:
✎ Vertical movement of the lifting mechanism is restricted to seventy-two inches (1800 mm) or less from the ground.

✎ The high lift rider truck will operate only in an area where:

- The top of a tiered load will not be more than one hundred twenty inches (3000 mm) high.
- The bottom of a tiered load will not be more than seventy-two inches (1800 mm) high.
- Only stable loads are handled.
- The operator is protected from objects falling from high stack areas.

Note:

The overhead guard is not intended to withstand the impact of a maximum capacity load of the PIT.

You must:

✎ Equip all high lift rider trucks with overhead guards that meet the design and construction requirements of American National Standards Institute (ANSI) B56.1-1993, Safety Standards for Powered Industrial Trucks.

✎ Use a vertical load backrest extension to keep all or any part of the load from falling backwards towards the operator if the load presents a hazard.

NEW SECTION

WAC 296-863-20025 Provide fall protection on order pickers.

You must:

✎ Make sure order pickers have either:

- Standard guardrails on all open sides;

OR

- A safety harness and lanyard that are connected to a tie off point that has been approved by the PIT manufacturer.

✎ Make sure personal fall arrest equipment meets the requirements of WAC 296-24-87035, Appendix C--Personal fall arrest systems.

NEW SECTION

WAC 296-863-20030 Provide directional lights on PITs when required.

You must:

✎ Provide PITs with directional lighting if the general lighting is less than two lumens per square foot.

Note:

✎ Lighting levels can be measured with a light meter.

✎ Conversion information: One foot-candle = one lumen incident per square foot = 10.76 lux.

NEW SECTION

WAC 296-863-20035 Make sure liquefied petroleum gas (LPG) fueled PITs meet these requirements.

You must:

✎ Use fuel containers that meet **either** of the following minimum requirements:

- A U.S. Department of Transportation (USDOT) approved container authorized for LP-gas service that has a minimum service pressure of two hundred forty pounds per square inch gage (psig);

OR

- A container Type 250 that has a design pressure of 312.5 psig.

✎ Make sure fuel containers do not use variable liquid-level gages that require venting fuel to the atmosphere.

✎ Make sure the fuel system of PITs **used inside buildings:**

- Has an approved automatic shutoff valve, located ahead of the inlet of the gas-air mixer, that will stop the flow of fuel to the mixer if the engine stops;

AND

- Use not more than two LP-gas fuel containers.

✎ Make sure the fuel system of PITs **used outdoors** has an approved automatic shutoff valve, located ahead of the inlet of the gas-air mixer, that will stop the flow of fuel to the mixer if both:

- The ignition is OFF.
- The engine is not running.

Note: You may use an atmospheric type regulator (zero governor) as a shutoff valve if the PIT is used outdoors.

NEW SECTION

WAC 296-863-20040 Meet these requirements when converting gasoline fuel PITs to liquefied petroleum gas (LPG) fuel.

You must:

✎ Make sure PITs originally approved to use gasoline for fuel that are then converted to LPG fuel:

- Meet the requirements for LP or LPS designated PITs;

AND

- Are converted using only approved equipment.

Definitions:

✎ **LP** refers to liquefied petroleum gas-powered trucks that, in addition to meeting all the requirements for type G trucks, have minimum acceptable safeguards against inherent fire hazards.

✎ **LPS** refers to liquefied petroleum gas powered trucks that in addition to meeting the requirements for LP type trucks, have additional exhaust, fuel, and electrical systems safeguards.

Note:

✎ Tables 1, 2, and 3 list the types of PITs and the locations where they can be used safely.

✎ The description of the component parts of the conversion system and the recommended method of installation on specific PITs are contained in the "*Listed by Report*" provided by the testing laboratory.

NEW SECTION

WAC 296-863-300 Inspection, repair, maintenance, and servicing.

Summary:

Your responsibility:

To make sure PITs are kept in safe condition and properly serviced.

References:

✎ Appropriate respiratory protection may need to be used when operating PITs. See chapter 296-841 WAC, Respiratory hazards, for more information.

✎ Appropriate PPE may need to be worn. See WAC 296-800-160 in the *Safety and Health Core Rules* for more information.

You must:

Inspect, repair and maintain PITs

Make sure PITs are in safe working condition

WAC 296-863-30005.

Inspect your PITs

WAC 296-863-30010.

Meet these requirements when repairing PITs

WAC 296-863-30015.

Maintain your PITs properly

WAC 296-863-30020.

Service your PITs

Service gasoline fueled PITs safely

WAC 296-863-30025.

Service liquefied petroleum gas (LPG) fueled PITs safely

WAC 296-863-30030.

Make sure battery charging areas are safe

WAC 296-863-30035.

Service batteries for electric PITs safely

WAC 296-863-30040.

NEW SECTION

WAC 296-863-30005 Make sure PITs are in safe working condition.

You must:

 Remove any PIT from service that is not in safe operating condition.

 Immediately remove PITs from service that have any of the following problems, and do not return them to service until the cause of the problem has been eliminated:

- A leak in the fuel system.
- A clogged water muffler screen or other muffler part.
- An exhaust system that is emitting hazardous sparks or flames.
- A part that is hotter than its normal operating temperature thus creating a hazardous condition.

NEW SECTION

WAC 296-863-30010 Inspect your PITs.

You must:

 Inspect PITs according to the manufacturer's instructions.

 Inspect PITs at these times:

- Daily before being put into service;

AND

- After each shift, if the PIT is used on a continuous (twenty-four-hour) basis.

Note: You can designate someone on the off-going shift, on-coming shift, or some other person to do the inspection.

You must:

✎ Report and correct any deficiencies noted during the inspection.

NEW SECTION

WAC 296-863-30015 Meet these requirements when repairing PITs.

You must:

- ✎ Make sure repairs are made by authorized persons.
- ✎ Make sure replacement parts are equivalent to the parts used in the original design.
- ✎ Make sure repairs are not made in Class I, II, or III locations. See Tables 1, 2, and 3 for more information.

Definitions:

Class I locations are areas where flammable gases or vapors are or may be present in the air in quantities sufficient to produce explosive or ignitable mixtures.

Class II locations are areas where the presence of combustible dust could be sufficient to produce explosions.

Class III locations are areas where the presence of easily ignitable fibers are suspended in the air but are not in large enough quantities to produce ignitable mixtures.

You must:

- ✎ Make sure fuel and ignition system repairs that involve fire hazards are made only in locations designated for such repairs.
- ✎ Disconnect the battery before starting repairs to a PIT electrical system.
- ✎ Close the fuel container shutoff valve before repairing an LP-gas fueled PIT in a garage.

Exemption: The container shutoff valve may be left open if it is necessary to run the engine.

NEW SECTION

WAC 296-863-30020 Maintain your PITs properly.

You must:

- ✎ Maintain PITs according to this chapter and the manufacture's instructions.
- ✎ Keep PITs:
 - Clean.
 - Free of excess lint, oil, and grease.

✎ Take appropriate precautions to protect employees from the hazards associated with the cleaning agents or solvents used.

- Precautions could include methods such as ventilation.

✎ Make sure solvents used for cleaning PITs have a flash point of 100°F Fahrenheit or more.

NEW SECTION

WAC 296-863-30025 Service gasoline fueled PITs safely.

You must:

✎ Handle and store liquid fuels, such as gasoline and diesel fuel, according to the National Fire Protection Association Flammable and Combustible Liquids Code (NFPA No. 30-1996).

Note: National Fire Protection Association codes are available by:
Purchasing copies by writing:
National Fire Protection Association
1 Batterymarch Park
Quincy, MA 02169-7471
OR
Contacting the NFPA website at www.nfpa.org.

You must:

- ✎ Stop the engine before filling a fuel tank.
- ✎ Avoid spilling fuel during servicing.
- ✎ Make sure you do **not** use open flames to check the gasoline level in fuel tanks.
- ✎ Do the following before restarting the engine after fueling:
 - Put on the fuel tank cap.
 - Make sure spilled oil or fuel is completely washed away or evaporated.

NEW SECTION

WAC 296-863-30030 Service liquefied petroleum gas (LPG) fueled PITs safely.

You must:

✎ Handle and store liquefied petroleum gas fuel according to the National Fire Protection Association Storage and Handling of Liquefied Petroleum Gases (NFPA No. 58-1998).

✎ Shut down the engine while fueling.

✎ Fuel PITs equipped with permanently mounted fuel containers outdoors.

✎ Make sure filling fuel containers from industrial bulk storage containers is done at least:

- Ten feet from the nearest masonry-walled building.
- Twenty-five feet from the nearest building or other construction.
- Twenty-five feet from any building opening.

✎ Make sure PITs are stored or serviced inside garages only when:

- There are no leaks in the fuel system;

AND

- The fuel tanks are not filled beyond the maximum filling density specified in WAC 296-24-47505 (12)(a), Storage and handling of liquefied petroleum gases.

Reference: See chapter 296-24 WAC, Part F-1, for LPG charging equipment requirements and maximum filling density and LPG service stations.

NEW SECTION

WAC 296-863-30035 Make sure battery charging areas are safe.

You must:

✎ Make sure battery charging areas are designated and provided with all of the following:

- Means to flush and neutralize spilled electrolyte.
- Fire protection.
- Ventilation that is adequate to disperse fumes from gassing batteries.

✎ Prohibit smoking in battery charging areas.

✎ Take precautions to prevent open flames, sparks, or electric arcs in battery charging areas.

✎ Protect battery charging equipment from being damaged by PITs.

✎ Provide at least one of the following to handle batteries:

- Conveyor.
- Overhead hoist.
- Other equivalent material handling equipment.

NEW SECTION

WAC 296-863-30040 Service batteries for electric PITs safely.

You must:

✎ Make sure PITs are properly positioned with the brake on before charging or changing batteries.

✎ Make sure you do **not** use open flames to check the electrolyte level in storage batteries.

✎ Do the following when charging batteries:

- Make sure vent caps are functioning.

- Open the battery or compartment covers to dissipate heat.

- Pour acid into water, never pour water into acid.

✎ Provide a carboy tilter or siphon to handle electrolyte.

✎ Keep tools and other metallic objects away from the top of uncovered batteries.

✎ Make sure reinstalled batteries are properly positioned and secured.

NEW SECTION

WAC 296-863-400 Operations.

Summary:

Your responsibility:

To operate your PITs safely.

You must:

General operations

Protect employees around PITs

WAC 296-863-40005.

Operate PITs safely

WAC 296-863-40010.

Make sure PIT loads are carried safely

WAC 296-863-40015.

Meet these requirements when the operator leaves the normal operating position

WAC 296-863-40020.

Meet these requirements when operating near railroad tracks

WAC 296-863-40025.

Special operations

Meet this requirement when using motorized hand trucks

WAC 296-863-40030.

Meet these requirements when using elevators

WAC 296-863-40035.

Meet these requirements when using dockboards (bridge plates)

WAC 296-863-40040.

Meet these requirements when loading or unloading railroad cars with a PIT

WAC 296-863-40045.

Meet these requirements when loading or unloading highway trucks with PITs

WAC 296-863-40050.

Liquefied petroleum gas (LPG) fueled PITs

Meet these additional requirements when operating liquefied petroleum gas (LPG) fueled PITs

WAC 296-863-40055.

Personnel lifting

Make sure work platforms and PITs used to lift people meet these requirements

WAC 296-863-40060.

Operate PITs using elevated work platforms safely

WAC 296-863-40065.

NEW SECTION

WAC 296-863-40005 Protect employees around PITs.

You must:

✎ Make sure operators use restraint devices, such as seatbelts or lap-bars, when they are provided on the PIT.

✎ Make sure you do not allow people:

- Under the elevated part of any PIT, whether it is loaded or empty;

- To put any part of their body between the uprights of the mast;

OR

- Outside the running lines of the PIT.

✎ Make sure you do not allow unauthorized people to ride on PITs.

✎ Make sure people riding on PITs have a safe place to ride.

✎ Make sure you do not allow stunt driving or horseplay.

✎ Make sure PITs are not driven up to anyone in front of a bench or other fixed object.

✎ Make sure access to fire aisles, stairways, and fire equipment is kept clear.

✎ Make sure there is sufficient headroom under overhead installations such as lights, pipes, and sprinkler systems to safely operate PITs.

Reference: PIT operations may cause the airborne concentration levels of carbon monoxide gas to increase. You have to keep the concentration levels below the levels specified in chapter 296-841 WAC, Respiratory hazards.

NEW SECTION

WAC 296-863-40010 Operate PITs safely.

You must:

✎ Operate PITs according to the manufacturer's instructions.

✎ Make sure PIT operators do all of the following:

- Obey all traffic regulations, including authorized workplace speed limits.

- Yield the right of way to ambulances, fire trucks, and other vehicles in emergency situations.

- Keep a safe distance of approximately three truck lengths from the PIT ahead.

- Look in the direction they are going and keep a clear view of their path of travel.

- Slow down and sound the horn at cross aisles and other locations where vision is obstructed.

- Do not pass other PITs traveling in the same direction at intersections, blind spots, or other dangerous locations.

- Keep a safe distance from the edge of ramps or platforms while on any of the following:

✂ Elevated docks.

✂ Elevated platforms.

✂ Freight cars.

✎ Make sure operators keep PITs under control at all times, including doing all of the following:

- Drive at a speed that allows the PIT to be stopped safely.

- Drive more slowly on wet or slippery floors.

- Reduce speed to a safe level while turning.

- Avoid driving over loose objects.

NEW SECTION

WAC 296-863-40015 Make sure PIT loads are carried safely.

You must:

(1) Make sure loads are stable, safe and within the rated load capacity of the PIT.

(2) Do both of the following when picking up a load:

✎ Place the load engaging means under the load as far as possible.

✎ Tilt the mast carefully backwards to stabilize the load.

(3) Make sure not to tilt the load engaging means forward when it is elevated unless:

✎ Picking up a load;

OR

✎ Depositing a load on a rack or stack.

(4) Do both of the following when traveling with a load:

✎ Keep the load trailing if it obstructs the operator's forward view.

✎ Travel with the load upslope when climbing or descending slopes of more than ten percent.

(5) Do both of the following when climbing a slope:

✎ Tilt the load and load engagement means backwards if necessary to stabilize the load;

AND

✎ Raise the load and load engagement means only as far as necessary to clear the surface.

(6) Make sure PITS with attachments are operated as partially loaded trucks, even if they are **not** carrying a load.

NEW SECTION

WAC 296-863-40020 Meet these requirements when the operator leaves the normal operating position.

You must:

✎ Make sure operators do the following when getting off the PIT:

- Fully lower the load engaging means.
- Neutralize the controls.
- Set the brakes.

✎ Make sure operators do the following when leaving a PIT unattended:

- Fully lower the load engaging means.
- Neutralize the controls.
- Shut off power.
- Set the brakes.
- Block the wheels, if parked on an incline.

Note: A PIT is unattended when the operator:

✎ Is more than twenty-five feet away;

OR

NEW SECTION

WAC 296-863-40025 Meet these requirements when operating near railroad tracks.

You must:

✎ Make sure PITs are driven diagonally across railroad tracks, whenever possible.

✎ Make sure PITs are parked eight feet six inches or more from the center of any railroad tracks.

NEW SECTION

WAC 296-863-40030 Meet this requirement when using motorized hand trucks.

You must:

✎ Make sure motorized hand trucks enter elevators and other confining areas with the load end forward.

NEW SECTION

WAC 296-863-40035 Meet these requirements when using elevators.

You must:

✎ Do both of the following when driving PITs onto an elevator:

- Approach slowly.
- Enter the elevator squarely after the elevator car is leveled.

✎ Do all the following after the PIT is positioned on the elevator:

- Neutralize the controls.
- Shut off the power.
- Set the brakes.

NEW SECTION

WAC 296-863-40040 Meet these requirements when using dockboards (bridge plates).

You must:

- ✎ Make sure dockboards are not overloaded:
 - Make sure they are strong enough to carry the load imposed on them.
 - Make sure loads do not exceed the dockboard's rated capacity.
- ✎ Do the following when using dockboards:
 - Drive slowly and carefully over dockboards.
 - Properly secure dockboards before driving on them.
- ✎ Make sure powered dockboards meet the design and construction requirements of U.S. Department of Commerce Commercial Standard CS 202-56 (1961) "Industrial Lifts and Hinged Loading Ramps."
- ✎ Do the following when using portable dockboards:
 - Use anchors or other devices that will prevent slipping.
 - Make sure they have handholds or other effective means for safe handling.

NEW SECTION

WAC 296-863-40045 Meet these requirements when loading or unloading railroad cars with a PIT.

You must:

- ✎ Check the railroad car flooring for breaks or weakness before driving on it.
- ✎ Set the brakes and use wheel stops or other recognized positive protection to keep railcars from moving:
 - During loading or unloading operations;
- OR
 - While dockboards (bridge plates) are in position.
- ✎ Meet these requirements when using PITs to open or close freight car doors:
 - The PIT has to have an approved device specifically designed to open and close doors.
 - The device has to be designed so that force will be applied to the door parallel to door travel.
 - The PIT operator has to be trained to use the device and

have full view of the operation.

- People must be kept clear while the door is being moved.

NEW SECTION

WAC 296-863-40050 Meet these requirements when loading or unloading highway trucks with PITs.

You must:

✎ Check the truck or trailer flooring for breaks or weakness before driving on it.

✎ Prevent movement of trucks or trailers during loading or unloading by:

- Setting the brakes;

AND

- Chocking or blocking the wheels.

Exemptions: ✎ You can use mechanical means instead of wheel chocks or blocks to secure the trailer to the loading dock.

✎ Wheel chocks or blocks are not required when:

- The mechanical means prevents the trailer from moving away from the dock.
- The mechanical equipment is used and maintained as recommended by the manufacturer.
- Damaged mechanical equipment is immediately removed from service.

Note: You may need to use fixed jacks to keep a semi-trailer that is not coupled to a tractor from up ending during loading or unloading.

NEW SECTION

WAC 296-863-40055 Meet these additional requirements when operating liquefied petroleum gas (LPG) fueled PITs.

You must:

✎ Make sure you do not park PITs near:

- Sources of heat, open flames, or similar ignition sources;

OR

- Open pits, such as service pits, that do not have adequate ventilation.

✎ Make sure PITs stored inside a garage do not have:

- A leak in the fuel system.
- Fuel containers filled beyond the maximum filling capacity.

Reference: See WAC 296-24-47505(12), Storage and handling of liquefied petroleum gases, for maximum filling capacities.

NEW SECTION

WAC 296-863-40060 Make sure work platforms and PITs used to lift people meet these requirements.

You must:

- ✎ Make sure work platforms:
 - Are securely fastened to the lifting carriage or forks.
 - Have standard guardrails and toeboards on all sides.
- ✎ Guard the area between the platform and the PIT mast to prevent employee contact with chains or other shear points.
- ✎ Make sure PITs used to elevate a work platform have a lift mechanism that can not drop faster than one hundred thirty five feet per minute in the event of a system failure.
- ✎ Make sure the lifting carriage or forks are prevented from tilting.

Note: Examples of how this may be accomplished are the use of:

- ✎ A control lever that prevents the inadvertent movement; or
- ✎ Use of a strap or other device to hold the control lever in position.

You must:

- ✎ Make sure PITs with controls (vertical only or horizontal and vertical) that can be elevated with the lifting carriage or forks, have a way for people on the platform to shut off power to the PIT.

Note: You can find the minimum requirements for standard railings of various types of construction in WAC 296-24-75011, Railings, toeboards and cover specifications.

NEW SECTION

WAC 296-863-40065 Operate PITs using elevated work platforms safely.

You must:

- ✎ Make sure the PIT operator:
 - Is attending the lift equipment when workers are on the platform.
 - Is in the normal operating position while raising or lowering the platform.

Note: A PIT is unattended when the operator:

- ✎ Is more than twenty-five feet away;
- OR**
- ✎ Cannot see the PIT.

You must:

- ✎ Make sure the operator does **not** move the PIT from one

point to another while workers are on the platform.

- The operator may inch or maneuver the PIT at very low speed with workers on the platform.

NEW SECTION

WAC 296-863-500 Hazardous (classified) locations.

Summary:

Your responsibility:

To use PITs safely in hazardous (classified) locations.

You must:

Use the appropriate approved PITs in hazardous (classified) locations

WAC 296-863-50005.

NEW SECTION

WAC 296-863-50005 Use the appropriate PITs in hazardous (classified) locations.

You must:

 Make sure PITs are used in hazardous (classified) locations as follows:

- PITs authorized to be used in Class 1 locations are shown in Table 1, Approved PIT Use in Class 1 Locations.

- PITs authorized to be used in Class 2 locations are shown in Table 2, Approved PIT Use in Class 2 Locations.

- PITs authorized to be used in Class 3 locations are shown in Table 3, Approved PIT Use in Class 3 Locations.

 PITs authorized to be used in unclassified locations are:

- Approved PITs designated as Type D, E, G, or LP;

AND

- PITs that meet the requirements of a Type D, E, G, or LP PIT.

Definitions:

 An unclassified location is an area that is not designated as a Class 1, 2, or 3 location.

 Designations means a code used to show the different types of hazardous (classified) locations where PITs can be safely used:

- **D** refers to trucks that are diesel engine powered that have minimum safeguards against inherent fire hazards.

- **DS** refers to diesel powered trucks that, in addition to

meeting all the requirements for type D trucks, are provided with additional safeguards to the exhaust, fuel and electrical systems.

- **DY** refers to diesel powered trucks that have all the safeguards of the DS trucks and, in addition, any electrical equipment is completely enclosed. They are equipped with temperature limitation features.

- **E** refers to electrically powered trucks that have minimum acceptable safeguards against inherent fire hazards.

- **ES** refers to electrically powered trucks that, in addition to all of the requirements for the E trucks, have additional safeguards to the electrical system to prevent emission of hazardous sparks and to limit surface temperatures.

- **EE** refers to electrically powered trucks that have, in addition to all of the requirements for the E and ES type trucks, have their electric motors and all other electrical equipment completely enclosed.

- **EX** refers to electrically powered trucks that differ from E, ES, or EE type trucks in that the electrical fittings and equipment are designed, constructed and assembled to be used in atmospheres containing flammable vapors or dusts.

- **G** refers to gasoline powered trucks that have minimum acceptable safeguards against inherent fire hazards.

- **GS** refers to gasoline powered trucks that are provided with additional exhaust, fuel, and electrical systems safeguards.

- **LP** refers to liquefied petroleum gas-powered trucks that, in addition to meeting all the requirements for type G trucks, have minimum acceptable safeguards against inherent fire hazards.

- **LPS** refers to liquefied petroleum gas-powered trucks that in addition to meeting the requirements for LP type trucks, have additional exhaust, fuel, and electrical systems safeguards.

Note:

- ✍ Tables 1, 2, and 3 show the type of approved PITs that can be used in the appropriate divisions and groups.
- ✍ PITs cannot be used in divisions and groups that do not have a PIT designation listed.
- ✍ Approved PITs will be marked or labeled with the designation of the PIT. See WAC 296-863-20010, Make sure PITs are properly labeled.

Table 1
Approved PIT Use in Class 1 Locations

Class 1							
Locations in which flammable gases or vapors are, or may be, present in the air in quantities sufficient to produce explosive or ignitable mixtures.							
Division 1				Division 2			
Conditions exist continuously, intermittently, or periodically under normal operating conditions.				Conditions may occur due to accidentally, for example, due to a puncture of a storage drum.			
<u>Group A</u>	<u>Group B</u>	<u>Group C</u>	<u>Group D</u>	<u>Group A</u>	<u>Group B</u>	<u>Group C</u>	<u>Group D</u>

Acetylene	Hydrogen	Ethyl ether	Acetone Alcohols Benzene Gasoline Lacquer solvent	Acetylene	Hydrogen	Ethyl ether	Acetone Alcohols Benzene Gasoline Lacquer solvent
No PIT type can be used	No PIT type can be used	No PIT type can be used	Use this PIT type: EX	No PIT type can be used	No PIT type can be used	No PIT type can be used	Use this PIT type: DS DY ES EE EX GS LPS

Table 2
Approved PIT Use in Class 2 Locations

Class 2 Locations which are hazardous because of the presence of combustible dust.					
Division 1			Division 2		
Explosive mixture may be present under normal operating conditions, or where failure of equipment may cause the condition to exist simultaneously with arcing or sparking of electrical equipment, or where dusts of an electrically conducting nature may be present.			Explosive mixture not normally present, but where deposits of dust may cause heat rise in electrical equipment, or where such deposits may be ignited by arcs or sparks from electrical equipment.		
Group E	Group F	Group G	Group E	Group F	Group G
Metal dust	Carbon black Coal dust Coke dust	Grain dust Flour dust Starch dust Organic dust	Metal dust	Carbon black Coal dust Coke dust	Grain dust Flour dust Starch dust Organic dust
No PIT type can be used	Use this PIT type: EX	Use this PIT type: EX	No PIT type can be used	Use this PIT type: EX DY EE	Use this PIT type: DS DY ES EE EX GS LPS

Table 3
Approved PIT Use in Class 3 Locations

Class 3 Locations where easily ignitable fibers or flyings are present but not likely to be in suspension in quantities sufficient to produce ignitable mixtures.	
Division 1	Division 2

Locations in which easily ignitable fibers or materials producing combustible flyings are handled, manufactured, or used.	Locations in which easily ignitable fibers are stored or handled (except in the process of manufacture).
Use this PIT type: DY EE EX	Use this PIT type: DS DY E ES EE EX GS LPS

NEW SECTION

WAC 296-863-600 Training.

Summary:

Your responsibility:

To make sure PIT operators are competent.

You must:

Operator training

Make sure PIT operators are trained

WAC 296-863-60005.

Retrain PIT operators as required

WAC 296-863-60010.

Evaluate PIT operators performance

WAC 296-863-60015.

NEW SECTION

WAC 296-863-60005 Make sure PIT operators are trained.

You must:

 Make sure employees successfully complete an operator training program before operating PITs. The only time a trainee can operate a PIT is:

- Under the direct supervision of a person who has the knowledge, training, and experience to train and evaluate operators;

AND

- When operating the PIT does not endanger the trainee or other employees.

✍ Make sure training is done by you or someone you designate that has the knowledge, training, and experience to:

- Conduct the training;

AND

- Evaluate trainee competence.

✍ Make sure your operator training program consists of:

- Formal instruction.

✂ Such as lecture and discussion, interactive computer learning, video tapes, and written material.

- Practical training.

✂ Such as demonstrations done by the trainer and practical exercises performed by trainees.

- Evaluation of trainee performance.

✍ Make sure the initial operator training program covers the subjects in Table 4, Required Training Topics.

Note:

If an operator has previously received training specified in Table 4, Required Training Topics, additional training in that topic is not required if:

- ✍ The training was appropriate to the PIT and working conditions in your workplace;

AND

- ✍ The employee has passed a PIT performance evaluation within the last three years.

Table 4
Required Training Topics

Topics related to powered industrial truck	Topics related to your workplace
✍ Operating instructions,	✍ Surface conditions where the PIT will be operated
✍ Warnings and precautions for the types of PIT the operator will be authorized to operate	✍ Composition of loads to be carried and load stability
✍ Differences between the PIT and the automobile	✍ Load manipulation, stacking, and unstacking
✍ PIT controls and instrumentation: Where they are located, what they do, and how they work	✍ Pedestrian traffic in areas where the PIT will be operated
✍ Engine or motor operation	✍ Narrow aisles and other restricted places where the PIT will be operated
✍ Steering and maneuvering	✍ Use of door opening and closing devices
✍ Visibility (including restrictions due to loading)	✍ Hazardous (classified) locations where the PIT will be operated
✍ Fork and attachment adaptation, operation, and use limitations	✍ Ramps and other sloped surfaces that could affect the PITs stability

✍ PIT capacity	✍ Closed environments and other areas where insufficient ventilation or poor PIT maintenance could cause a buildup of carbon monoxide or diesel exhaust
✍ PIT stability	✍ Other unique or potentially hazardous environmental conditions in the workplace that could affect safe operation
✍ Any PIT inspection and maintenance that the operator will be required to perform	
✍ Refueling	
✍ Charging and recharging of batteries	
✍ Operating limitations	
✍ Any other operating instructions, warnings, or precautions listed in the operator's manual for the types of PIT that the employee is being trained to operate	

You must:

✍ Keep written records of operator training and evaluations that include the following information:

- Name of the operator.
- Date of the training.
- Date of the evaluation.
- Name of the person giving the training or evaluation.

NEW SECTION

WAC 296-863-60010 Retrain PIT operators as required.

You must:

✍ Provide PIT operators refresher training if **any** of the following occur:

- The operator is involved in an accident or near-miss incident.
- The operator is seen operating the PIT in an unsafe manner.
- An evaluation shows the operator is not operating the PIT safely.

- The operator is assigned to drive a different type or modified PIT.
- Conditions in the workplace change that could affect safe operation of the PIT.

Note: Refresher training is required only in those topics where the operator has been found deficient.

NEW SECTION

WAC 296-863-60015 Evaluate PIT operators performance.

You must:

-  Evaluate PIT operators performance at each of these times:
 - As part of their initial training program.
 - After refresher training to determine the effectiveness of the training.
 - At least once every three years.

NEW SECTION

WAC 296-863-700 Definitions.

ANSI is an acronym for the American National Standards Institute.

Authorized person (maintenance) means a person who has been designated to perform maintenance on a PIT.

Authorized person (training) means a person approved or assigned by the employer to perform training for powered industrial truck operators.

Approved means listed or approved by a nationally recognized testing laboratory or a federal agency that issues approvals for equipment such as the Mine Safety and Health Administration (MSHA); the National Institute for Occupational Safety and Health (NIOSH); Department of Transportation; or U.S. Coast Guard, which issue approvals for such equipment.

Bridge plate (dockboard) means a device used to span the distance between rail cars or highway vehicles and loading platforms.

Classified location or hazardous location means areas that could be hazardous because of explosive or flammable atmospheres. These locations are broken down into the following categories:

-  Class I locations are areas where flammable gases or

vapors are or may be present in the air in quantities sufficient to produce explosive or ignitable mixtures.

✎ Class II locations are areas where the presence of combustible dust could be sufficient to produce explosions.

✎ Class III locations are areas where the presence of easily ignitable fibers are suspended in the air but are not in large enough quantities to produce ignitable mixtures.

Counterweight means a weight used to counteract or the load being carried by the truck, or to increase the load carrying capacity of a truck.

Designations means a code used to show the different types of hazardous (classified) locations where PITs can be safely used:

✎ **D** refers to trucks that are diesel engine powered that have minimum safeguards against inherent fire hazards.

✎ **DS** refers to diesel powered trucks that, in addition to meeting all the requirements for type D trucks, are provided with additional safeguards to the exhaust, fuel and electrical systems.

✎ **DY** refers to diesel powered trucks that have all the safeguards of the DS trucks and, in addition, any electrical equipment is completely enclosed. They are equipped with temperature limitation features.

✎ **E** refers to electrically powered trucks that have minimum acceptable safeguards against inherent fire hazards.

✎ **ES** refers to electrically powered trucks that, in addition to all of the requirements for the E trucks, have additional safeguards to the electrical system to prevent emission of hazardous sparks and to limit surface temperatures.

✎ **EE** refers to electrically powered trucks that have, in addition to all of the requirements for the E and ES type trucks, have their electric motors and all other electrical equipment completely enclosed.

✎ **EX** refers to electrically powered trucks that differ from E, ES, or EE type trucks in that the electrical fittings and equipment are designed, constructed and assembled to be used in atmospheres containing flammable vapors or dusts.

✎ **G** refers to gasoline powered trucks that have minimum acceptable safeguards against inherent fire hazards.

✎ **GS** refers to gasoline powered trucks that are provided with additional exhaust, fuel, and electrical systems safeguards.

✎ **LP** refers to liquefied petroleum gas-powered trucks that, in addition to meeting all the requirements for type G trucks, have minimum acceptable safeguards against inherent fire hazards.

✎ **LPS** refers to liquefied petroleum gas powered trucks that in addition to meeting the requirements for LP type trucks, have

additional exhaust, fuel, and electrical systems safeguards.

Electrolyte means a chemical, usually acid, that is mixed with water to produce electricity.

Flammable liquid means any liquid having a flashpoint below 100°F (37.8°C), except any mixture having components with flashpoints of 100°F (37.8°C) or higher, the total of which make up 99% or more of the total volume of the mixture.

Flashpoint means the minimum temperature at which a liquid gives off enough vapor to ignite.

Front-end attachment means a device that is attached to the forks or lifting device of the truck.

Lanyard means a flexible line of webbing, rope, or cable used to secure a harness to an anchor point.

Listed by report means a reporting listing the field assembly, installation procedures, or both, for a UL listed product that does not have generally recognized installation requirements.

Liquefied petroleum gas means any gas that is composed predominantly of the following hydrocarbons, or mixtures of them; propane, propylene, butanes (normal butane or iso-butane), and butylenes.

Load engaging means a device attached to a powered industrial truck and used to manipulate or carry a load.

Motorized hand truck means a powered truck with wheeled forks designed to go under or between pallets and is controlled by a walking or riding operator.

Nationally recognized testing laboratory means an organization recognized by the Occupational Safety and Health Administration that conducts safety tests on equipment and materials.

Order picker means a truck controlled by an operator who is stationed on a platform that moves with the load engaging means.

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

Rough terrain forklift truck means a truck intended to be used on unimproved natural terrain and at construction sites.

Safety harness (full body harness) means a configuration of connected straps to distribute a fall arresting force over at least the thighs, shoulders and pelvis, with provisions for attaching a lanyard, lifeline, or deceleration devices.

Tie-off point (anchorage) means a secure point to attach a lanyard that meets the requirements of WAC 296-24-87035, Appendix--C Personal fall arrest systems.

Vertical load backrest extension means a device that extends vertically from the fork carriage frame.