National Grain and Feed Association

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NGFA Safety Tips: Powered Industrial Trucks

…Committed to promoting safety and health in the workplace...

Powered Industrial Trucks in Grain, Feed and Processing Industries

The preamble of OSHA's final rule that established the powered industrial truck (PIT) standard describes a PIT as, "any mobile power-propelled truck used to carry, push, pull, lift, stack or tier materials." Powered industrial trucks can be ridden or controlled by a walking operator. Earth-moving and over-the-road haulage trucks are not included in the definition. Equipment that was designed to move earth, but has been modified to accept forks, is not included.

OSHA's current standard for PITs requires the equipment to be designed, constructed, maintained and operated in accordance with the American National Standards Institute (ANSI) B56.1–1969, Safety Standards for Powered Industrial Trucks. In addition, the standard requires that operators be competent to operate a forklift safely, as demonstrated by the successful completion of the specified training and evaluation.

Requirements of the Standards

The standard requires employers to develop and implement a training program based on the general principles of safe truck operation, the types of vehicle(s) being used in the workplace, the hazards of the workplace created by the use of the vehicle(s), and the general safety requirements of the OSHA standard. Formal (e.g., lecture, video, etc.) and practical (e.g., demonstration and practical exercises) training is to be provided. Employers also are required to certify that each operator has received the training and to evaluate each operator at least once every three years. Prior to the employee operating the truck in the workplace, the employer is required to evaluate the operator's performance and determine the operator to be competent to safely operate a PIT. Refresher training is needed whenever an operator demonstrates a deficiency in the safe operation of the truck.

NOTE: *A training program outline and template are provided in the "Reference Corner" of this document.*

Training

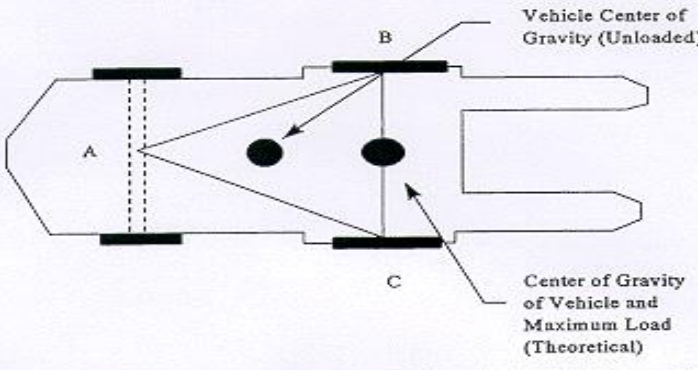
All training and evaluation should be conducted by persons with the necessary knowledge, training, and experience to train PIT operators and evaluate their competence. An example of a qualified trainer is: 1) a person with a recognized degree, certificate, or professional standing; or 2) a person with extensive knowledge, training, and experience who has demonstrated the ability to train and evaluate PIT operators.

NGFA Safety Program

- The NGFA is committed to promoting safety and health in the workplace and shares the Occupational Safety and Health Administration's (OSHA's) commitment to protecting employees.
- The NGFA's extensive efforts to enhance safety include unprecedented research and education efforts launched in the early 1980s that helped lead to a dramatic reduction in the number of fire and explosion incidents in commercial grain-handling facilities.
- Each year, NGFA jointly sponsors regional safety seminars with affiliated state and regional grain and feed associations. The one-day conferences focus on keeping grain handling employees safe.
- ngfa.org/safety

Considerations in the Operation of PITs

Figure 1.

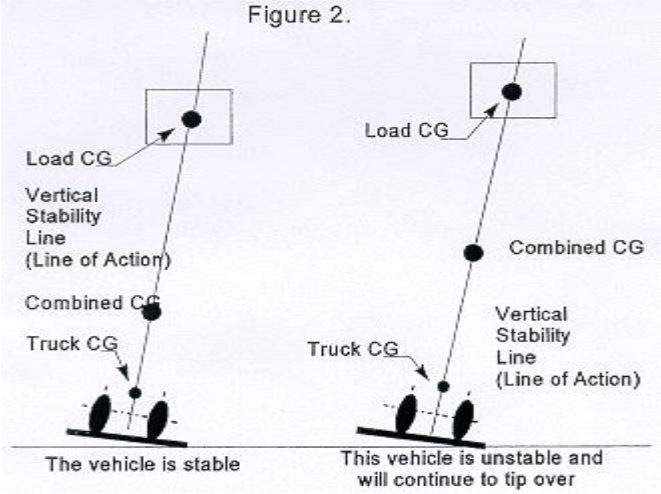


Notes:

1. When the vehicle is loaded, the combined center of gravity (CG) shifts toward line B-C. Theoretically the maximum load will result in the CG at the line B-C. In actual practice, the combined CG should never be at line B-C.
2. The addition of additional counterweight will cause the truck CG to shift toward point A and result in a truck that is less stable laterally.

A counterbalanced PIT typically has a three-point suspension system; thus, the vehicle is supported at three points. This is true even if the vehicle has four wheels. The truck's steer axle is attached to the truck by a pivot pin in the axle's center. When the points are connected with imaginary lines, this three-point support forms a triangle called the ***stability triangle***. (See Figure 1).

Figure 2.



When the vehicle's line of action, or load center, falls within the stability triangle, the vehicle is stable and will not tip over. However, when the vehicle's line of action or the vehicle/load combination falls outside the stability triangle, the vehicle is unstable and may tip over. (See Figure 2).

Best Practices

- Always operate the PIT according to the manufacturer's instructions.
- Always wear a seatbelt when the forklift has one.
- Never exceed the rated load and ensure the load is stable and balanced.
- Do not raise or lower the load when traveling.
- Keep a safe distance from platform and ramp edges.
- Be aware of other vehicles in the work area.
- Have clear visibility of the work area and ensure proper clearance when, raising, loading, and operating the PIT.
- Use proper footing and handhold, if available, when entering the lift.
- Use horns at cross aisles and obstructed areas.
- Watch for pedestrians and observe the speed limit.
- Do not give rides or use the PIT to lift people.

NGFA Reference Corner

OSHA's Laws & Regulations 29 CFR 1910.178 Powered Industrial Trucks / Appendix A

OSHA's eTools, Powered Industrial Trucks (Forklift)

Training Program with Outline

Applicability of 1910.178 to earth moving equipment and skid steer loaders

More safety information at *www.ngfa.org*

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