For the 5-year, 9-month period from January 2012 to September 2016, there were 778 LBM establishments cited for a total of 989 instances of violations of the OSHA Standard 1910.178, Powered Industrial Trucks. For the 12-month period October 2015 through September 2016, the LBM sector ranked 10th among a ranking of NAICS Industry Groups for the number of 1910.178 citations.

The table below summarizes the specific requirement category of Standard 1910.178 involved over the period January 2012 to September 2016. The detailed provisions cited are provided immediately after the table. Those citations with hyperlinks navigate to relevant OSHA Directives and Standard Interpretations.

<table>
<thead>
<tr>
<th>Standard Subsection</th>
<th>Number of Establishments</th>
<th>Number of Instances</th>
<th>Highest Initial Penalty</th>
</tr>
</thead>
<tbody>
<tr>
<td>General Requirements (1910.178(a))</td>
<td>52</td>
<td>68</td>
<td>$7,000</td>
</tr>
<tr>
<td>Safety guards (1910.178(e))</td>
<td>1</td>
<td>1</td>
<td>$2,040</td>
</tr>
<tr>
<td>Fuel handling and storage (1910.178(f))</td>
<td>2</td>
<td>2</td>
<td>$2,800</td>
</tr>
<tr>
<td>Changing and charging storage batteries (1910.178(g))</td>
<td>3</td>
<td>3</td>
<td>$7,000</td>
</tr>
<tr>
<td>Trucks and railroad cars (1910.178(k))</td>
<td>1</td>
<td>2</td>
<td>$2,400</td>
</tr>
<tr>
<td>Operator training (1910.178(l))</td>
<td>484</td>
<td>602</td>
<td>$9,800</td>
</tr>
<tr>
<td>Truck operations (1910.178(m))</td>
<td>33</td>
<td>40</td>
<td>$7,000</td>
</tr>
<tr>
<td>Traveling (1910.178(n))</td>
<td>13</td>
<td>15</td>
<td>$7,000</td>
</tr>
<tr>
<td>Loading (1910.178(o))</td>
<td>10</td>
<td>10</td>
<td>$7,000</td>
</tr>
<tr>
<td>Operation of the truck (1910.178(p))</td>
<td>86</td>
<td>120</td>
<td>$20,000</td>
</tr>
<tr>
<td>Maintenance of industrial trucks (1910.178(q))</td>
<td>93</td>
<td>126</td>
<td>$70,000</td>
</tr>
</tbody>
</table>
1910.178(a)

**General requirements**

Approved trucks shall bear a label or some other identifying mark indicating approval by the testing laboratory.¹ 1910.178(a)(3)

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. 1910.178(a)(4)

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. 1910.178(a)(5)

The user shall see that all nameplates and markings are in place and are maintained in a legible condition. 1910.178(a)(6)

1910.178(e)

**Safety guards**

If the type of load presents a hazard, the user shall equip fork trucks with a vertical load backrest extension manufactured in accordance with paragraph (a) (2) of this section.² 1910.178(e)(2)

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¹ See paragraph (a)(7) of this section and paragraph 405 of "American National Standard for Powered Industrial Trucks, Part II, ANSI B56.1-1969", which is incorporated by reference in paragraph (a)(2) of this section and which provides that if the powered industrial truck is accepted by a nationally recognized testing laboratory it should be so marked.

1910.178(a)(7)

As used in this section, the term, "approved truck" or "approved industrial truck" means 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. Refer to 1910.155(c)(3)(iv)(A) for definition of nationally recognized testing laboratory.

² All new powered industrial trucks acquired and used by an employer shall meet the design and construction requirements for powered industrial trucks established in the "American National Standard for Powered Industrial Trucks, Part II, ANSI B56.1-1969", which is incorporated by reference as specified in § 1910.6, except for vehicles intended primarily for earth moving or over-the-road hauling.
1910.178(f)  
**Fuel handling and storage**

The storage and handling of liquefied petroleum gas fuel shall be in accordance with NFPA Storage and Handling of Liquefied Petroleum Gases (NFPA No. 58-1969), which is incorporated by reference as specified in Sec. 1910.6. 1910.178(f)(2)

1910.178(g)  
**Changing and charging storage batteries**

Battery charging installations shall be located in areas designated for that purpose. 1910.178(g)(1)

Facilities shall be provided for flushing and neutralizing spilled electrolyte, for fire protection, for protecting charging apparatus from damage by trucks, and for adequate ventilation for dispersal of fumes from gassing batteries. 1910.178(g)(2)

Precautions shall be taken to prevent open flames, sparks, or electric arcs in battery charging areas. 1910.178(g)(11)

1910.178(k)  
**Trucks and railroad cars**

The brakes of highway trucks shall be set and wheel chocks placed under the rear wheels to prevent the trucks from rolling while they are boarded with powered industrial trucks. 1910.178(k)(1)

1910.178(l)  
**Operator training**

The employer shall ensure that each powered industrial truck operator is competent to operate a powered industrial truck safely, as demonstrated by the successful completion of the training and evaluation specified in this paragraph (l). 1910.178(l)(1)(i)

Prior to permitting an employee to operate a powered industrial truck (except for training purposes), the employer shall ensure that each operator has successfully completed the training required by this paragraph (l), except as permitted by paragraph (l)(5). 1910.178(l)(1)(ii)

Trainees may operate a powered industrial truck only:

- Under the direct supervision of persons who have the knowledge, training, and
experience to train operators and evaluate their competence. [1910.178(l)(2)(i)(A)]

- Where such operation does not endanger the trainee or other employees. [1910.178(l)(2)(i)(B)]

Training shall consist of a combination of formal instruction (e.g., lecture, discussion, interactive computer learning, video tape, written material), practical training (demonstrations performed by the trainer and practical exercises performed by the trainee), and evaluation of the operator's performance in the workplace. 1910.178(l)(2)(ii)

All operator training and evaluation shall be conducted by persons who have the knowledge, training, and experience to train powered industrial truck operators and evaluate their competence. 1910.178(l)(2)(iii)

1910.178(l)(3)
Training program content

Powered industrial truck operators shall receive initial training in the following topics, except in topics which the employer can demonstrate are not applicable to safe operation of the truck in the employer's workplace.

1910.178(l)(3)(i)
Truck-related topics:

- Operating instructions, warnings, and precautions for the types of truck the operator will be authorized to operate [1910.178(l)(3)(i)(A)]
- Vehicle capacity [1910.178(l)(3)(i)(H)]
- Any vehicle inspection and maintenance that the operator will be required to perform [1910.178(l)(3)(i)(J)]
- Operating limitations [1910.178(l)(3)(i)(L)]
- Any other operating instructions, warnings, or precautions listed in the operator's manual for the types of vehicle that the employee is being trained to operate [1910.178(l)(3)(i)(M)]

1910.178(l)(3)(ii)
Workplace-related topics:

- Ramps and other sloped surfaces that could affect the vehicle's stability [1910.178(l)(3)(ii)(G)]
Refresher training and evaluation

- Refresher training, including an evaluation of the effectiveness of that training, shall be conducted as required by paragraph (l)(4)(ii) to ensure that the operator has the knowledge and skills needed to operate the powered industrial truck safely [1910.178(l)(4)(i)]
- Refresher training in relevant topics shall be provided to the operator when:
  - The operator has been observed to operate the vehicle in an unsafe manner [1910.178(l)(4)(ii)(A)]
  - The operator has been involved in an accident or near-miss incident [1910.178(l)(4)(ii)(B)]
- An evaluation of each powered industrial truck operator's performance shall be conducted at least once every three years [1910.178(l)(4)(iii)]

Avoidance of duplicative training

If an operator has previously received training in a topic specified in paragraph (l)(3) of this section, and such training is appropriate to the truck and working conditions encountered, additional training in that topic is not required if the operator has been evaluated and found competent to operate the truck safely.

Certification

The employer shall certify that each operator has been trained and evaluated as required by this paragraph (l). The certification shall include the name of the operator, the date of the training, the date of the evaluation, and the identity of the person(s) performing the training or evaluation.

Truck operations

Trucks shall not be driven up to anyone standing in front of a bench or other fixed object. 1910.178(m)(1)

Unauthorized personnel shall not be permitted to ride on powered industrial trucks. A safe place to ride shall be provided where riding of trucks is authorized. 1910.178(m)(3)

When a powered industrial truck is left unattended, load engaging means shall be fully lowered, controls shall be neutralized, power shall be shut off, and brakes set. Wheels shall be blocked if the truck is parked on an incline. 1910.178(m)(5)(i)
A powered industrial truck is unattended when the operator is 25 ft. or more away from the vehicle which remains in his view, or whenever the operator leaves the vehicle and it is not in his view. **1910.178(m)(5)(ii)**

When the operator of an industrial truck is dismounted and within 25 ft. of the truck still in his view, the load engaging means shall be fully lowered, controls neutralized, and the brakes set to prevent movement. **1910.178(m)(5)(iii)**

A safe distance shall be maintained from the edge of ramps or platforms while on any elevated dock, or platform or freight car. Trucks shall not be used for opening or closing freight doors. **1910.178(m)(6)**

Brakes shall be set and wheel blocks shall be in place to prevent movement of trucks, trailers, or railroad cars while loading or unloading. Fixed jacks may be necessary to support a semitrailer during loading or unloading when the trailer is not coupled to a tractor. The flooring of trucks, trailers, and railroad cars shall be checked for breaks and weakness before they are driven onto. **1910.178(m)(7)**

There shall be sufficient headroom under overhead installations, lights, pipes, sprinkler system, etc. **1910.178(m)(8)**

**1910.178(n)**

**Traveling**

All traffic regulations shall be observed, including authorized plant speed limits. A safe distance shall be maintained approximately three truck lengths from the truck ahead, and the truck shall be kept under control at all times. **1910.178(n)(1)**

The driver shall be required to slow down and sound the horn at cross aisles and other locations where vision is obstructed. If the load being carried obstructs forward view, the driver shall be required to travel with the load trailing. **1910.178(n)(4)**

The driver shall be required to look in the direction of, and keep a clear view of the path of travel. **1910.178(n)(6)**

Under all travel conditions the truck shall be operated at a speed that will permit it to be brought to a stop in a safe manner. **1910.178(n)(8)**

Stunt driving and horseplay shall not be permitted. **1910.178(n)(9)**

Running over loose objects on the roadway surface shall be avoided. **1910.178(n)(14)**
1910.178(o)

**Loading**

Only stable or safely arranged loads shall be handled. Caution shall be exercised when handling off-center loads which cannot be centered. 1910.178(o)(1)

Only loads within the rated capacity of the truck shall be handled. 1910.178(o)(2)

1910.178(p)

**Operation of the truck**

If at any time a powered industrial truck is found to be in need of repair, defective, or in any way unsafe, the truck shall be taken out of service until it has been restored to safe operating condition. 1910.178(p)(1)

1910.178(q)

**Maintenance of industrial trucks**

Any power-operated industrial truck not in safe operating condition shall be removed from service. All repairs shall be made by authorized personnel. 1910.178(q)(1)

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. 1910.178(q)(5)

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, except as provided in paragraph (q)(12) of this section. Additional counterweighting of fork trucks shall not be done unless approved by the truck manufacturer. 1910.178(q)(6)

Industrial trucks shall 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. Where industrial trucks are used on a round-the-clock basis, they shall be examined after each shift. Defects when found shall be immediately reported and corrected. 1910.178(q)(7)