

**TITLE 8:
GENERAL INDUSTRY SAFETY ORDERS
Chapter 4, Subchapter 7,
Articles 25, Sections 3650 and 3664**

Operating Rules for Industrial Trucks

Heard at the October 18, 2001, Public Hearing
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**STANDARDS PRESENTATION
TO
CALIFORNIA OCCUPATIONAL SAFETY AND HEALTH STANDARDS BOARD**

PROPOSED STATE STANDARD,
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Amend Section 3650 to read as follows:

§3650. Industrial Trucks. General.

(a) All new low lift and high lift trucks manufactured after June 26, 1998, shall be labeled as meeting the design and construction requirements of Part III, ASME B56.1-1993, Safety Standard for Low Lift and High Lift Trucks. All low lift and high lift trucks manufactured on or before June 26, 1998, shall be labeled as meeting either the design and construction requirements of the ASME standard indicated above or Part II, of the ANSI B56.1-1975 standard.

(b)(1) Except as provided in subsection (a), industrial trucks manufactured after September 1, 1991 through March 1, 1999 shall have affixed a legible tag or label stating compliance with the following applicable standards or those listed in subsection (b)(2):

NFPA 505-1987, formerly ANSI B56.2-1987, for powered industrial trucks,

UL 583-1984, formerly ANSI B56.3-1977, for electric-battery-powered industrial trucks,

UL 558-1984, formerly ANSI B56.4-1977, for internal combustion engine powered industrial trucks,

ANSI/ASME B56.5-1988 for guided industrial vehicles,

ANSI/ASME B56.6-1987 for rough terrain forklift trucks,

ANSI/ASME B56.7-1987 for industrial crane trucks,

ANSI/ASME B56.8-1988 for personnel and burden carriers,

ANSI/ASME B56.9-1987 for operator controlled industrial tow tractors.

(2) Except as provided in subsection (a), industrial trucks manufactured after March 1, 1999 shall have affixed a legible tag or label stating compliance with the following applicable standards:

NFPA 505-1987, formerly ANSI B56.2-1978, for powered industrial trucks,

UL 583-1991, for electric-battery-powered industrial trucks,

UL 558-1991, for internal combustion engine powered industrial trucks,

ASME B56.5-1993, for guided industrial vehicles and automated functions of manned industrial vehicles,

ASME B56.6-1992, for rough terrain forklift trucks,

ANSI/ASME B56.7-1987, for industrial crane trucks,

ASME B56.8-1993, for personnel and burden carriers,

ASME B56.9-1992, for operator controlled industrial tow tractors.

~~(e)~~(3) All name plates and model number, type designation and load capacity markings on industrial trucks, shall be maintained in a legible condition by the employer.

~~(d)~~(c) If the truck is equipped with front-end attachments other than factory installed attachments, the truck shall be marked to identify the attachments and show the approximate weight of the truck and attachment combination, and capacity of the truck and attachment combination at maximum elevation of the load engaging means with the load laterally centered.

~~(e)~~(d) Major modifications and structural changes to high lift trucks, industrial trucks and rider trucks that affect the capacity and safe handling of the vehicles shall not be performed by the

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employer or user without prior written approval from the manufacturer unless the modification is designed, manufactured, and installed in accordance with recognized good engineering and manufacturing principles. The capacity, operation and maintenance instruction plates shall be changed accordingly.

~~(f)~~(e) Industrial trucks originally approved for the use of gasoline for fuel may be converted to liquefied petroleum gas fuel provided the complete conversion results in a truck which embodies the features specified for LP or LPS designated trucks as defined in Chapter 1-3, of NFPA 505-1987, which is herein incorporated by reference. Such conversion equipment shall be approved.

(1) When a conversion kit is installed, the original type designation shall be removed or obliterated and replaced with a durable, corrosion-resistant plate permanently mounted on the truck indicating the type designation of the converted truck.

~~(g)~~(f) Powered industrial trucks shall not be operated in atmospheres containing more than 20 percent of the Lower Explosive Limit of flammable gas or vapor unless approved for the area as provided in ~~(h)~~ (g).

NOTE: Concentrations below 20 percent of the Lower Explosive Limit may still require mandatory use of air-supplied respiratory protection. (See Section 5144.)

~~(h)~~(g) Only industrial trucks approved for the exposure may be operated in atmospheres containing hazardous quantities of combustible dusts and ignitable fibers. Approval and area designation shall be based on NFPA 505-1982 with appropriate labeling.

~~(i)~~(1) Approved trucks shall bear a permanent legible label or some other identifying mark indicating approval by the testing laboratory.

~~(j)~~(h) When industrial trucks operate in areas where general lighting is less than 2 footcandles per square foot, directional lighting shall be provided on the truck.

~~(k)~~(i) Trailers disconnected from their tractor shall be secured to prevent them from up-ending during loading or unloading operations. This may require utilization of auxiliary jacks designed for that purpose.

~~(l)~~(j) Industrial trucks shall not be operated in areas that expose the operator to the hazard of collision with overhead obstructions unless the truck is equipped with overhead guards. (See Section 3655.)

~~(m)~~(k) Loads of excessive width, length or height shall be so balanced, braced, and secured as to prevent tipping and falling.

~~(n)~~(l) Batteries installed in trucks shall be secured in suitable racks which are secured to the truck.

~~(o)~~(m) After April 1, 1979, ~~m~~Motorized hand and hand/rider trucks shall be designed so that the brakes are applied and the power to the drive motor shut off when the operator releases his grip on the control tongue, or the device used to control travel.

EXCEPTION: Vehicles designed for use in order picking operations are exempt from the braking requirements, provided the speed of the vehicle does not exceed 3.5 mph while the operator is walking the vehicle.

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- ~~(p)~~(n) Radio remote control vehicles shall be equipped with positive means which restrict the speed of the vehicle to 3.5 mph while the equipment is being operated with radio remote control.
- ~~(q)~~(o) Steering knobs shall not be used unless the truck is equipped with power steering.
- ~~(r)~~(p) When cargo is being towed on pipe trucks or similar equipment, a safe means shall be provided to protect the driver from sliding loads.
- ~~(s)~~(q) Counterweights shall be so affixed that they cannot be accidentally dislodged.
- ~~(t)~~(r) Forks, fork extensions and other attachments shall be secured so that they cannot be inadvertently dislodged, and shall be used only in accordance with the manufacturer's recommendations.
- (s) Industrial trucks and tow tractors shall be operated in a safe manner in accordance with the following operating rules:
- (1) Only drivers authorized by the employer and trained in the safe operations of industrial trucks or industrial tow tractors pursuant to Section 3668 shall be permitted to operate such vehicles.
- (2) Stunt driving and horseplay are prohibited.
- (3) No riders shall be permitted on vehicles unless provided with adequate riding facilities.
- (4) Employees shall not ride on the forks of lift trucks.
- (5) Employees shall not place any part of their bodies outside the running lines of an industrial truck or between mast uprights or other parts of the truck where shear or crushing hazards exist.
- (6) Employees shall not be allowed to stand, pass, or work under the elevated portion of any industrial truck, loaded or empty, unless it is effectively blocked to prevent it from falling.
- (7) Drivers shall check the vehicle at the beginning of each shift, and if it is found to be unsafe, the matter shall be reported immediately to a foreman or mechanic, and the vehicle shall not be put in service again until it has been made safe. Attention shall be given to the proper functioning of tires, horn, lights, battery, controller, brakes, steering mechanism, cooling system, and the lift system for fork lifts (forks, chains, cable, and limit switches).
- (8) No truck shall be operated with a leak in the fuel system.
- (9) Vehicles shall not exceed the authorized or safe speed, always maintaining a safe distance from other vehicles, keeping the truck under positive control at all times and all established traffic regulations shall be observed. For trucks traveling in the same direction, a safe distance may be considered to be approximately 3 truck lengths or preferably a time lapse - 3 seconds - passing the same point.
- (10) Trucks traveling in the same direction shall not be passed at intersections, blind spots, or dangerous locations.
- (11) The driver shall 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.
- (12) Operators shall look in the direction of travel and shall not move a vehicle until certain that all persons are in the clear.
- (13) Trucks shall not be driven up to anyone standing in front of a bench or other fixed object of such size that the person could be caught between the truck and object.

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(14) Grades shall be ascended or descended slowly.

(A) When ascending or descending grades in excess of 10 percent, loaded trucks shall be driven with the load upgrade.

(B) On all grades the load and load engaging means shall be tilted back if applicable, and raised only as far as necessary to clear the road surface.

(C) Motorized hand and hand/rider trucks shall be operated on all grades with the load-engaging means downgrade.

(15) The forks shall always be carried as low as possible, consistent with safe operations.

(16) When leaving a vehicle unattended (the operator is over 25 feet (7.6 meters) from or out of sight of the industrial truck), the brakes are set, the mast is brought to the vertical position, and forks are left in the down position, either:

(A) The power shall be shut off and, when left on an incline, the wheels shall be blocked; or

(B) The power may remain on provided the wheels are blocked, front and rear.

(17) When the operator of an industrial truck is dismounted and within 25 feet (7.6 meters) of the truck which remains in the operator's view, the load engaging means shall be fully lowered, controls placed in neutral, and the brakes set to prevent movement.

EXCEPTION: Forks on fork-equipped industrial trucks may be in the raised position for loading and unloading if the forks are raised no more than 42 inches above the level where the operator/loaders are standing, and the power is shut off, controls placed in neutral and the brakes set. If on an incline, the wheels shall be blocked.

(18) Vehicles shall not be run onto any elevator unless the driver is specifically authorized to do so. Before entering an elevator, the driver shall determine that the capacity of the elevator will not be exceeded. Once on an elevator, the industrial truck's power shall be shut off and the brakes set.

(19) Motorized hand trucks shall enter elevators or other confined areas with the load end forward.

(20) Vehicles shall not be operated on floors, sidewalk doors, or platforms that will not safely support the loaded vehicle.

(21) Prior to driving onto trucks, trailers and railroad cars, their flooring shall be checked for breaks and other structural weaknesses.

(22) Vehicles shall not be driven in and out of highway trucks and trailers at loading docks until such trucks or trailers are securely blocked or restrained and the brakes set.

(23) To prevent railroad cars from moving during loading or unloading operations, the car brakes shall be set, wheel chocks or other recognized positive stops used, and blue flags or lights displayed in accordance with applicable regulations promulgated by the Public Utilities Commission.

(24) The width of one tire on the powered industrial truck shall be the minimum distance maintained from the edge by the truck while it is on any elevated dock, platform, freight car or truck.

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(25) Railroad tracks shall be crossed diagonally, wherever possible. Parking closer than 8 1/2 feet from the centerline of railroad tracks is prohibited.

(26) Trucks shall not be loaded in excess of their rated capacity.

(27) A loaded vehicle shall not be moved until the load is safe and secure.

(28) Extreme care shall be taken when tilting loads. Tilting forward with the load engaging means elevated shall be prohibited except when picking up a load. Elevated loads shall not be tilted forward except when the load is being deposited onto a storage rack or equivalent. When stacking or tiering, backward tilt shall be limited to that necessary to stabilize the load.

(29) The load engaging device shall be placed in such a manner that the load will be securely held or supported.

(30) Special precautions shall be taken in the securing and handling of loads by trucks equipped with attachments, and during the operation of these trucks after the loads have been removed.

(31) When powered industrial trucks are used to open and close doors, the following provisions shall be complied with:

(A) A device specifically designed for opening or closing doors shall be attached to the truck.

(B) The force applied by the device to the door shall be applied parallel to the direction of travel of the door.

(C) The entire door opening operation shall be in full view of the operator.

(D) The truck operator and other employees shall be clear of the area where the door might fall while being opened.

(32) If loads are lifted by two or more trucks working in unison, the total weight of the load shall not exceed the combined rated lifting capacity of all trucks involved.

NOTE: Authority cited: Section 142.3, Labor Code. Reference: Section 142.3, Labor Code.

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Amend Section 3664 to read as follows:

§3664. Operating Rules.

(a) Every employer using industrial trucks or industrial tow tractors, shall post and enforce a set of operating rules including the appropriate rules listed below in Section 3650(s).:

~~(1) Only drivers authorized by the employer and trained in the safe operations of industrial trucks or industrial tow tractors shall be permitted to operate such vehicles. Methods shall be devised to train operators in safe operation of powered industrial trucks.~~

~~(2) Stunt driving and horseplay are prohibited.~~

~~(3) No riders shall be permitted on vehicles unless provided with adequate riding facilities.~~

~~(4) Employees shall not ride on the forks of lift trucks.~~

~~(5) Employees shall not place any part of their bodies outside the running lines of an industrial truck or between mast uprights or other parts of the truck where shear or crushing hazards exist.~~

~~(6) Employees shall not be allowed to stand, pass, or work under the elevated portion of any industrial truck, loaded or empty, unless it is effectively blocked to prevent it from falling.~~

~~(7) Drivers shall check the vehicle at least once per shift, and if it is found to be unsafe, the matter shall be reported immediately to a foreman or mechanic, and the vehicle shall not be put in service again until it has been made safe. Attention shall be given to the proper functioning of tires, horn, lights, battery, controller, brakes, steering mechanism, cooling system, and the lift system for fork lifts (forks, chains, cable, and limit switches).~~

~~(8) No truck shall be operated with a leak in the fuel system.~~

~~(9) Vehicles shall not exceed the authorized or safe speed, always maintaining a safe distance from other vehicles, keeping the truck under positive control at all times and all established traffic regulations shall be observed. For trucks traveling in the same direction, a safe distance may be considered to be approximately 3 truck lengths or preferably a time lapse—3 seconds—passing the same point.~~

~~(10) Trucks traveling in the same direction shall not be passed at intersections, blind spots, or dangerous locations.~~

~~(11) The driver shall 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.~~

~~(12) Operators shall look in the direction of travel and shall not move a vehicle until certain that all persons are in the clear.~~

~~(13) Trucks shall not be driven up to anyone standing in front of a bench or other fixed object of such size that the person could be caught between the truck and object.~~

~~(14) Grades shall be ascended or descended slowly.~~

~~(A) When ascending or descending grades in excess of 10 percent, loaded trucks shall be driven with the load upgrade.~~

~~(B) On all grades the load and load engaging means shall be tilted back if applicable, and raised only as far as necessary to clear the road surface.~~

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~~(C) Motorized hand and hand/rider trucks shall be operated on all grades with the load engaging means downgrade.~~

~~(15) The forks shall always be carried as low as possible, consistent with safe operations.~~

~~(16) When leaving a vehicle unattended, either:~~

~~(A) The power shall be shut off, brakes set, the mast brought to the vertical position, and forks left in the down position. When left on an incline, the wheels shall be blocked; or~~

~~(B) The power may remain on provided the brakes are set, the mast is brought to the vertical position, forks are left in the down position, and the wheels shall be blocked, front and rear.~~

~~NOTE: When the operator is over 25 feet (7.6 meters) from or out of sight of the industrial truck, the vehicle is "unattended."~~

~~(17) When the operator of an industrial truck is dismounted and within 25 feet (7.6 meters) of the truck which remains in the operator's view, the load engaging means shall be fully lowered, controls placed in neutral, and the brakes set to prevent movement.~~

~~EXCEPTION: Forks on fork equipped industrial trucks may be in the raised position for loading and unloading if the forks are raised no more than 42 inches above the level where the operator/loaders are standing, and the power is shut off, controls placed in neutral and the brakes set. If on an incline, the wheels shall be blocked.~~

~~(18) Vehicles shall not be run onto any elevator unless the driver is specifically authorized to do so. Before entering an elevator, the driver shall determine that the capacity of the elevator will not be exceeded. Once on an elevator, the power shall be shut off and the brakes set.~~

~~(19) Motorized hand trucks shall enter elevators or other confined areas with the load end forward.~~

~~(20) Vehicles shall not be operated on floors, sidewalk doors, or platforms that will not safely support the loaded vehicle.~~

~~(21) Prior to driving onto trucks, trailers and railroad cars, their flooring shall be checked for breaks and other structural weaknesses.~~

~~(22) Vehicles shall not be driven in and out of highway trucks and trailers at loading docks until such trucks or trailers are securely blocked or restrained and the brakes set.~~

~~(23) To prevent railroad cars from moving during loading or unloading operations, the car brakes shall be set, wheel chocks or other recognized positive stops used, and blue flags or lights displayed in accordance with applicable regulations promulgated by the Public Utilities Commission.~~

~~(24) The width of one tire on the powered industrial truck shall be the minimum distance maintained from the edge by the truck while it is on any elevated dock, platform, freight car or truck.~~

~~(25) Railroad tracks shall be crossed diagonally, wherever possible. Parking closer than 8 1/2 feet from the centerline of railroad tracks is prohibited.~~

~~(26) Trucks shall not be loaded in excess of their rated capacity.~~

~~(27) A loaded vehicle shall not be moved until the load is safe and secure.~~

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~~(28) Extreme care shall be taken when tilting loads. Tilting forward with the load engaging means elevated shall be prohibited except when picking up a load. Elevated loads shall not be tilted forward except when the load is being deposited onto a storage rack or equivalent. When stacking or tiering, backward tilt shall be limited to that necessary to stabilize the load.~~

~~(29) The load engaging device shall be placed in such a manner that the load will be securely held or supported.~~

~~(30) Special precautions shall be taken in the securing and handling of loads by trucks equipped with attachments, and during the operation of these trucks after the loads have been removed.~~

~~(31) When powered industrial trucks are used to open and close doors, the following provisions shall be complied with:~~

~~(A) A device specifically designed for opening or closing doors shall be attached to the truck.~~

~~(B) The force applied by the device to the door shall be applied parallel to the direction of travel of the door.~~

~~(C) The entire door opening operation shall be in full view of the operator.~~

~~(D) The truck operator and other employees shall be clear of the area where the door might fall while being opened.~~

~~(32) If loads are lifted by two or more trucks working in unison, the total weight of the load shall not exceed the combined rated lifting capacity of all trucks involved.~~

(b) Every employee who operates an agricultural or industrial tractor shall be instructed in the following procedures and in any other practices dictated by the work environment. Such information shall be provided at the time of initial assignment and at least annually thereafter. Copies of these instructions, printed in a language understood by the majority of the employees, shall be conspicuously posted at a place frequented by the drivers.

EMPLOYEE OPERATING INSTRUCTIONS

1. Securely fasten your seat belt if the tractor has a ROPS.
 2. Where possible, avoid operating the tractor near ditches, embankments, and holes.
 3. Reduce speed when turning, crossing slopes, and on rough, slick, or muddy surfaces.
 4. Stay off slopes too steep for safe operation.
 5. Watch where you are going, especially at row ends, on roads, and around trees.
 6. Do not permit others to ride.
 7. Operate the tractor smoothly - no jerky turns, starts, or stops.
 8. Hitch only to the drawbar and hitch points recommended by tractor manufacturers.
 9. When tractor is stopped, set brakes securely and use park lock if available.
- (c) Every employee who operates an agricultural or industrial tractor shall be required to check the tractor prior to operation each day and if it is unsafe report the matter immediately to a foreman or mechanic and shall not use the tractor again until it has been made safe.
- (d) Employees shall be prohibited from stunt driving or horseplay while operating an agricultural or industrial tractor.

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(e) No repairs shall be performed on any agricultural or industrial trucks or tractors until arrangements have been made to reduce the probability of injury to repairmen or others caused by sudden movement or operation of such equipment or its parts.

NOTE: Authority cited: Section 142.3, Labor Code. Reference: Section 142.3, Labor Code.