

Memorandum

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OCCUPATIONAL SAFETY AND HEALTH

To: Marley Hart, Executive Officer
Occupational Safety and Health Standards Board
2520 Venture Oaks Way, Suite 350
Sacramento, CA 95833

STANDARDS BOARD Date: August 24, 2017

From: Juliann Sum, Chief
Division of Occupational Safety and Health
Department of Industrial Relations

A handwritten signature in black ink, appearing to be "JS", written over a horizontal line.

Re: Petition No. 565 to amend title 8 section 3657 and add new section 3458.2

1.0 INTRODUCTION AND BACKGROUND

On April 28, 2017, the Division of Occupational Safety and Health (Cal/OSHA) received a petition from James T. Dufour (petitioner) on behalf of the California Date Commission, an association of 92 grower-members. The petitioner requests amending California Code of Regulations, title 8, section 3657 ("Elevating Employees with Lift Trucks"), which is contained in group 4, article 25 of the General Industry Safety Orders, and adding new section 3457.2 to group 3, article 13 ("Agricultural Operations") of the General Industry Safety Orders. The petition proposes to allow new work practices (which are currently prohibited) for date palm tree operations.

2.0 PETITIONER'S REQUEST

The petition applies only to work done on date palm trees from elevated platforms mounted on lift trucks. The petitioner requests that exceptions be added to existing section 3657 and requests the creation of a new section 3458.2.

The proposed exceptions to section 3657 would permit the following (currently prohibited) practices for date palm tree operations:

1. No operator would be required at the control position of a lift truck while employees are on the lift truck-mounted elevated platform.
2. The operator would be allowed to drive the lift truck while employees remain on the elevated platform.

New section 3458.2 would include provisions to protect elevated employees on lift trucks while there is no operator at the controls and while the operator is driving the lift truck.

The proposal is based on permanent variances previously approved by the Occupational Safety and Health Standards Board (Standards Board). The proposed changes are shown below in underline strikeout format.

2.1 Proposed exceptions to section 3657

In Group 4, Article 25, the applicant proposes exceptions to section 3657 as follows:

Subchapter 7. General Industry Safety Orders
Group 4. General Mobile Equipment and Auxiliaries
Article 25. Industrial Trucks, Tractors, Haulage Vehicles, and Earthmoving Equipment.

§3657. Elevating Employees with Lift Trucks.

* * * * *

(e) There shall be an operator in the control position on the truck while employees are on the elevated platform.

Exception: Use of mobile equipment-mounted platforms in date palm tending is subject to Article 13, Section 3458.2(a).

* * * * *

(j)(7) Never travel with personnel on the work platform other than to make minor movements for final positioning of the platform.

Exception: Minor movement of a variable reach (boom type) rough-terrain lift truck is permitted for construction operations when positioning the platform along a straight line where the path of movement is free from excavations, holes, obstructions and debris.

Exception 2: Use of mobile equipment-mounted platforms in date palm tending is subject to Article 13, Section 3458.2(b).

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2.2 Proposed new section 3458.2 to article 13

In group 3, article 13, the applicant proposes new section 3458.2 for the use of mobile equipment-mounted platforms when used to work on date palms.

Subchapter 7. General Industry Safety Orders
Group 3. General Plant Equipment and Special Operations
Article 13. Agricultural Operations

§ 3458.2 Mandatory Conditions for Use of Mobile Equipment-Mounted Platforms in Date Palm Tending

Use of mobile equipment-mounted platforms used in date palm maintenance shall comply with the following subsections to the extent applicable to Employer's operations.

(a) Use of employee-occupied mobile work platforms mounted on lift trucks shall comply with the following requirements

(1) The platform shall be securely attached to the lifting carriage, mast or [forks] to prevent tipping.

(2) A lift capacity evaluation (specific for the platform and lift truck combination in use) shall be performed in accordance with good engineering practice to ensure such equipment will not be overloaded. The lift capacity evaluation shall be made before such lifting equipment is placed into initial service for lifting employees.

(3) Work platforms shall only be used with the specific forklift for which a lifting capacity evaluation has been conducted.

(4) The results of the lift capacity evaluation required by Subsection (c)(2), including the maximum number of employees permitted on a specific work platform shall be kept and available on the lift truck for the operator's reference.

(5) Employer shall post a highly visible and weather-resistant sign in each work platform stating the maximum employee capacity of the platform and lift truck combination.

(6) In addition to inspections required by Title 8 GISO, Article 25, the forklifts, work platforms, and the means used to secure the work platforms to the forklift shall be visually inspected at least daily prior to use. An additional inspection shall be conducted prior to use after any repair to the platform or forklift. Employer shall develop and use an inspection form acceptable to the Division specific to the work platform and forklifts covered by this safety order. If a defect is found during the inspection, the work platform or forklift shall be removed from service until repaired and re-inspected. Inspection records shall be maintained in accordance with Title 8 Section 3203.

(7) Prior to elevating or lowering the platform, or moving a lift truck with employees on the work platform [consistent with Subsection (c) of this section], the operator shall ensure the platform is horizontal and centered.

(8) No tools or other equipment shall be allowed on work platforms except those necessary for date palm tending, production, and harvesting operations.

(9) In addition to training required by Title 8 GISO, Article 25, Employer shall train all persons who are permitted on work platforms, all persons who may operate forklifts subject to this safety order, supervisors and managers involved in operations covered by this safety order, and all persons responsible for maintaining equipment subject to this safety order. Records of training shall be maintained in accordance with Title 8 Section 3203. The training shall include, at a minimum:

(A) The conditions of this safety order.

(B) All work rules and usage rules associated with the work platforms.

(C) Proper daily inspection of the work platforms and associated forklifts.

(D) Procedures to be followed if an unsafe condition is detected.

(b) An operator shall be in the control position on the truck while employees are on the platform, unless the following conditions are in effect:

(1) The lift truck operator shall set the brakes and turn off the engine before exiting the lift truck. Upon exiting, the lift truck wheels shall be blocked.

(2) The lift truck operator shall be no more than 150-feet from any lift truck under his or her supervision while employees are on the elevated platform.

(3) The operator shall remain attentive, and maintain visual and audible contact with employees on the elevated platform(s).

(4) A lift truck operator shall operate and attend no more than three (3) lift trucks with personnel in elevated platforms, provided the operator is simultaneously and continuously within the 150-foot allowable operating area [defined in Subsection (b)(2)] of all lift trucks the operator is operating.

(5) Whenever employees are elevated on one or more work platforms, the lift truck operator and at least one other employee within the 150-foot allowable operating radius [defined in (b)(2)] shall have the capability of electronic communication to summon response personnel in the event of an emergency. The employee responsible for emergency communication shall be a person qualified to operate the forklifts.

(c) Traveling with personnel on the work platform is prohibited unless in compliance with the following conditions

(1) Employees on the work platform shall wear approved fall restraint equipment in accordance with Section 3458, and be tied-off to an approved anchorage point whenever platforms are elevated at any height and during movement or relocation of the platform

(2) For vertical-mast lift trucks traveling with employees on the work platform, the platform shall be lowered to no higher than 20 - 25 inches above the ground.

(3) For vertical-mast lift trucks traveling with employees on the work platform, the bottom portion of the platform shall be provided with a 20-inch length of colored chain to provide a height reference for the operator

(4) For rough terrain, high-reach lift trucks (with an extendable boom) traveling with employees on the work platform, the platform shall be positioned no higher than a height that permits the operator an unobstructed view.

(5) Travel through orchards, on farm roads, or any other road with persons on work platforms is prohibited. Movement of the lift truck with persons on the work platform shall be restricted to tree-to-tree travel within an orchard, on level ground free of obstructions and hazardous depressions

only. Tree-to-tree travel means travel between adjacent trees only. Any other travel with employees on the work platform is prohibited.

(6) Prior to movement of a lift truck with employees on the work platform, the operator shall conduct a visual survey of the path of travel to ensure there are no obstructions or depressions that would endanger the stability of the lift truck during movement.

(7) Prior to elevating or lowering the platform, or moving a lift truck with employees on the work platform, the operator shall alert persons on the platform.

(8) Prior to elevating or lowering the platform, or moving a lift truck with employees on the work platform, the operator shall ensure the platform is horizontal and centered.

(9) When moving the lift truck with employees on the work platform, the speed shall be no more than two (2) miles-per-hour.

(10) All employees shall move to the mast end of the work platform prior to movement or repositioning.

3.0 APPLICABLE FEDERAL OSHA REGULATIONS

Federal OSHA regulates the design, construction, use, and modification of industrial trucks in general industry in Code of Federal Regulations, title 29, section 1910.178. This section, however, does not contain requirements on elevating employees with lift trucks.

Federal OSHA regulates the use of mobile equipment to support scaffold platforms in construction in section 1926.602 as shown below. Date palm tree work, however, is not in the construction industry.

1926.451 Scaffolds. General requirements.

* * * * *

1926.451(c) "Criteria for supported scaffolds."

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1926.451(c)(2)(iv) Front-end loaders and similar pieces of equipment shall not be used to support scaffold platforms unless they have been specifically designed by the manufacturer for such use.

1926.451(c)(2)(v) Fork-lifts shall not be used to support scaffold platforms unless the entire platform is attached to the fork and the fork-lift is not moved horizontally while the platform is occupied.

* * * * *

4.0 ANSI/ITSDF B56.6

The American National Standards Institute (ANSI) addresses the design, construction, operation, and maintenance of rough terrain¹ industrial trucks in the B56.6 standard. Section 5.15 of the standard addresses elevating personnel with industrial trucks:

ANSI/ITSDF B56.6-2005 - Safety Standard for Rough Terrain Forklift Trucks

5.15 Elevating Personnel

5.15.1 A rough terrain forklift truck shall not be used to lift people unless there is no other practical option. If a rough terrain forklift truck must be used to lift people, the following precautions for the protection of personnel shall be taken:

- (a) provide a personnel platform which complies with the design requirements listed in Part III of this Standard;
- (b) be certain that the platform is securely attached to the lifting carriage and forks;
- (c) be certain that the lifting carriage and forks are secured to prevent them from pivoting upward;
- (d) on trucks equipped with rotators, deactivate the rotation;
- (e) provide protection for personnel in their normal working position on the platform from moving parts of the rough terrain forklift truck that represents a hazard;
- (f) provide overhead protection as indicated to be necessary by the operating conditions;
- (g) be certain that the lifting mechanism is operating smoothly throughout its entire lift range, both empty and loaded [as described in para. 5.15.1(t)], and that all lift limiting devices and latches, if provided, are functional;
- (h) be certain that the mast or boom travel is vertical - do not operate on a side slope unless the rough terrain forklift truck is leveled;
- (i) be certain that the platform is horizontal and never tilt platform forward or rearward when elevated;
- (j) be certain that the rough terrain forklift truck has a firm footing;
- (k) be certain that required straining means such as railings, chains, cable, body belt(s) with lanyard(s), etc., are in place and properly used;
- (l) place rough terrain forklift truck control(s) in neutral and set parking brake;
- (m) before elevating personnel, area shall be marked to warn of work by elevated personnel;
- (n) be certain that the path of platform travel is clear of hazards, e.g., storage racks, scaffolds, overhead obstructions, and electrical wires;
- (o) keep hands and feet clear of controls other than those in use;
- (p) lift and lower personnel smoothly, with caution, and only at their request;
- (q) always lower the platform if you must move the rough terrain forklift truck for adjustments in positioning;
- (r) alert elevated personnel before moving the platform. Then move the platform smoothly and with caution.

¹ Type of industrial truck design intended for operation on unimproved natural terrain as well as the disturbed terrain of construction sites.

(s) a trained operator shall be in position to control the rough terrain forklift truck, or available to operate controls if the platform is not equipped with controls. When the operator is not in the operating position, block the truck wheels and apply the parking brake with all travel controls in neutral.

(t) the combined mass (weight) of the platform, load, and personnel shall not exceed one-third of the capacity at the related load center position as indicated on the information plate(s) of the rough terrain forklift truck on which the platform is used;

(u) personnel are to maintain firm footing on platform floor unless secured by body belt and lanyard. Use of railings, planks, ladders, etc., on the platform for purpose of achieving additional reach or height is prohibited;

(v) be certain that personnel and equipment on the platform do not exceed the available space;

(w) platform shall be lowered to floor level for personnel to enter and exit. Personnel shall not climb on any part of the rough terrain forklift truck in attempting to enter and exit.

5.0 HAZARDS TO EMPLOYEES WORKING ON ELEVATED PLATFORMS

The major hazards to employees working on elevated platforms include falling from heights and being crushed by overhead fixed objects while the platform is lifting. These hazards are reasonably likely to result in death or serious injuries including:

1. Fractures
2. Crushing injuries
3. Lacerations
4. Concussions

6.0 PETITIONER'S BASIS FOR NEW REGULATION

The petitioner states that the proposed amendments will provide superior safety compared to the work methods historically performed by date growers. According to the petitioner, employees working on date palm trees perform fruit thinning, hand pollination, de-thorning, tie-down, bagging, and hand-harvesting of fruit. This entails employees ascending numerous times on ladders to access the fruit.

The Standards Board adopted regulations in 2003 and 2007 addressing fall protection and the use of ladders for date palm operations. The petitioner believes that those regulations do not allow the use of best practices, and that the petitioner's proposal will provide superior safety by allowing the use of specially designed work platforms for date palm operations as well as eliminating the need for employees to climb ladders to tend date palms. The proposal would also reduce the risk of employees suffering from heat illness in the warm climates where date palms are grown.

The petitioner points out that variances from title 8 sections 3548 and 3657 granted by the Standards Board, which were issued to 15 individual employers, demonstrate that equal or superior safety can be achieved through the proposed regulatory language, because the

proposal closely mirrors the provisions and conditions contained in those variances. In addition to providing superior safety for employees, the petitioner reasons that the proposed changes will eliminate the need for such variances in the future.

7.0 ANALYSIS

Work on date palm trees from platforms mounted on lift trucks is currently allowed by section 3657. The petition would serve to reduce the number of employees needed for such operations by allowing one operator to oversee three lift trucks. The petition would also increase the speed of date palm tree work by allowing employees to stay in elevated platforms while the lift truck is driven between trees. Each of the proposed provisions of the petition is analyzed below.

7.1 Proposed subsection 3458.2(a) (general requirements for use mobile work platforms mounted on lift trucks)

Proposed subsection 3458.2(a) contains general requirements for employees working from elevated platforms mounted on lift trucks. However, the requirements are similar to those in existing sections 3650 and 3657, and the hazards addressed by proposed subsection 3458.2(a) are present in all operations involving the use of employee-occupied work platforms mounted on lift trucks, not just date palm operations.

As discussed below, some parts of proposed subsection 3458.2(a) would duplicate or eliminate existing safety requirements, while other parts would add to existing safety requirements.

7.1.1. Proposed subsection 3458.2(a)(1) (secure attachment of the platform) – duplicates requirements in section 3657

The petition proposes to require the platform be securely attached to the lift truck. However, this requirement is already contained in existing section 3657(b)(2) as follows:

§3657. Elevating Employees with Lift Trucks.

* * * * *

(b) A work platform shall be used in accordance with the following conditions:

* * * * *

(2) Where the platform is not attached to the boom, the base of the platform shall be secured to the forks or the base of the fork carriage to prevent tipping, slipping or falling.

* * * * *

(j) When elevating personnel, the lift truck operator shall:

(1) Use a securely attached safety work platform.

* * * * *

7.1.2 Proposed subsections 3458.2(a)(2) through (a)(5) (lift capacity evaluation) – would add a signage requirement but remove a load limitation

The petition proposes to require a lift capacity evaluation, specific for the platform and lift truck combination in use, to be performed in accordance with good engineering practice to ensure such equipment will not be overloaded.

The existing requirements are the following:

7.1.2.1 All lift trucks

The requirement to ensure lift trucks are not overloaded is currently contained in subsection 3650(t)(26):

§3650. Industrial Trucks. General.

* * * * *

(t) Industrial trucks and tow tractors shall be operated in a safe manner in accordance with the following operating rules:

* * * * *

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

Proposed subsections 3458.2(a)(2) through 3458.2(a)(5) provide additional safety to the requirement of existing subsection 3650(t)(26) by requiring employers to post the maximum employee capacity of each work platform and lift truck combination in the work platform:

7.1.2.2 Rough terrain lift trucks

The requirement to ensure rough terrain lift trucks are not overloaded when lifting employees is currently contained in subsection 3657(k)(1) and 3657(k)(2). Employers are required to ensure that the total weight of an occupied platform does not exceed one-third the rated capacity of the rough terrain lift truck when there is no load chart specific to elevating personnel.

§3657. Elevating Employees with Lift Trucks.

* * * * *

(k) Where a variable reach (boom type) rough-terrain lift truck is used to elevate personnel, the operation shall comply with the following conditions, in addition to the requirements of subsections (a) through (j) of this section:

* * * * *

(1) If the lift truck is provided with a load chart for elevating personnel, the work platform shall be loaded and positioned within the limitations on the load chart.

(2) If the lift truck is not provided with a load chart for elevating personnel, the combined weight of the work platform, load, and personnel shall not exceed one third of the rated capacity of the rough-terrain lift truck at the load center position as indicated on the load chart for regular loads.

The proposed sections 3458.2(a)(2) through 3458.2(a)(5) do not require limiting the load to one-third of the capacity of rough terrain lift trucks as required by subsection 3656(k)(2). ANSI B56.6 section 5.15(t) also requires limiting the load to one-third of capacity on rough terrain lift trucks when lifting personnel.

7.1.3 Proposed subsections 3458.2(a)(6) (inspection of lift trucks and work platforms) – would add visual inspection requirements

The petition proposes to require additional inspections of lift trucks and platforms to those already required in sections 3650, which are the following:

§3650. Industrial Trucks, General.

* * * * *

(t) Industrial trucks and tow tractors shall be operated in a safe manner in accordance with the following operating rules:

* * * * *

(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).

The proposed additional inspections in the petition include the work platform and the method of securing the work platform to the lift truck. Such inspections are vital whenever platforms are attached to lift trucks to ensure platforms do not fall. However, no such requirements are contained in the existing title 8 regulation covering lift trucks and elevating employees with lift trucks. Such an addition should be applicable to all uses of attached platforms.

7.1.4 Proposed subsections 3358.2(a)(7) (leveling of the platform) – duplicates requirements in section 3657

The petition proposes to require that work platforms are horizontal and centered prior to elevating or lowering the platform. Similar requirements are currently in title 8 section 3657 as follows:

§3657. Elevating Employees with Lift Trucks.

* * * * *

(j) When elevating personnel, the lift truck operator shall:

* * * * *

(3) Make sure that the mast is vertical if the lift truck is equipped with a mast. The mast shall not be tilted forward or rearward while persons are elevated.

* * * * *

(k) Where a variable reach (boom type) rough-terrain lift truck is used to elevate personnel, the operation shall comply with the following conditions, in addition to the requirements of subsections (a) through (j) of this section:

* * * * *

(5) When elevating personnel with a variable reach rough-terrain lift truck, the operator shall:

(A) Maintain the platform at level throughout the personnel lifting operation.

7.1.5 Proposed subsections 3458.2(a)(8) (no unnecessary tools or equipment in the work platform) – would add requirements to reduce overhead hazards

The petition proposes to prohibit unnecessary tools or equipment in the work platform to reduce the overhead hazards to employees who may be working at ground level near the lift truck. No such provision exists in group 4, article 25, of the General Industry Safety Orders (sections 3649 through 3668).

7.1.6 Proposed subsections 3458.2(a)(9) (training) – would add training requirements

The petition proposes to require employees permitted to work on work platforms, lift truck operators, and supervisors and managers of lift truck operations to be trained on the proper usage and inspection of lift trucks and work platforms.

Currently section 3668 requires lift truck operators to be trained in the safe operation of the vehicles. However there are no training requirements in group 4, article 25, for managers and supervisors who oversee lift truck operations nor are there training requirements for employees who use elevated platforms.

7.2 Proposed exception to subsection 3657(e) and creation of new subsection 3458.2(b) (allowing the lift truck operator be away from the controls while employees are in an elevated platform mounted on the lift truck) – would eliminate a safety requirement

The purpose of requiring the operator to be at the controls of a lift truck is to ensure the operator is able to move the platform to a safe position immediately in the event of an emergency or hazardous condition. The proposal would eliminate this assurance because it would allow one operator to oversee three lift trucks simultaneously, with the operator located as much as 150 feet away from any one lift truck.

7.3 Proposed exception to subsection 3657(j)(7) and creation of new subsection 3458.2(c) (allowing employees to stay in elevated platforms while the lift truck is driven between trees) – may reduce heat illness risks

The purpose of prohibiting employees to stay in elevated platforms while the lift truck is driven is to prevent employees from being ejected or falling from the platform if the lift truck is upset by uneven ground or obstacle during travel.

The petition provides for the following methods to mitigate the potential of employees being ejected or falling from the platform during travel with the following measures:

- (1) Requiring employees in the platform to wear fall restraint equipment
- (2) Requiring the platform be located as low as possible during travel
- (3) Prohibiting travel on roads and restricting movement to tree-to-tree travel.

- (4) Requiring the operator to survey the path of travel of the vehicle to ensure there are no obstructions or depressions that would endanger the stability of the lift truck.
- (5) Warning employees on the work platform prior to movement
- (6) Limiting the maximum speed of lift trucks to 2 miles per hour.

Allowing employees to ride in the work platforms also reduces heat illness risks in hot climates where date palms are grown. Riding in the platform instead of walking reduces the physical exertion of employees.

8.0 CONCLUSION

For palm tree operations, proposed subsection 3458.2(a) (general safety provisions when using work platforms mounted on lift trucks), to be added to group 3, article 13, of the General Industry Safety Orders, contains requirements that either duplicate, eliminate, or add to existing safety requirements in group 4, article 25. Cal/OSHA believes that adopting subsection 3458.2(a) would create confusion for employers and workers and recommends instead that the new proposed safety requirements be added to existing sections contained in group 4, article 25.

The proposal to exempt date palm work from subsection 3657(e) and add new subsection 3458.2(b) to allow an operator to leave the controls of a lift truck while employees are in a mounted platform does not sufficiently address the hazards addressed by subsection 3657(e). Cal/OSHA therefore recommends that this proposal be denied.

The proposal to exempt date palm work from subsection 3657(j)(7) and add new subsection 3458.2(c) to allow employees to remain in elevated platforms while the lift truck moves appears to reduce heat illness risks for employees while also protecting employees from falling from the platform. Cal/OSHA recommends that such changes be made, although not necessarily by adding a new section to group 3, article 13.

Cal/OSHA recommends that an advisory committee be convened to discuss possible changes to existing regulations in group 4, article 25, that apply to date palm operations.

cc: Eric Berg, Jason Denning