

OFFICE OF LEGISLATIVE RESEARCH  
PUBLIC ACT SUMMARY



**PA 12-99—sSB 323**

*Public Safety and Security Committee*

**AN ACT CONCERNING CRANE OPERATIONS**

**SUMMARY:** This act makes changes in the laws governing cranes and hoisting equipment to comply with new federal Occupational Safety and Health Administration's (OSHA) requirements. Many of its provisions codify current state regulations.

Beginning October 1, 2014, the act adopts OSHA's definition of a crane. In doing so, it expands the (1) types of equipment and operators subject to state regulation, including operator licensing and training, and (2) scope of the state safety code for operating and maintaining cranes and hoisting equipment.

Prior law (1) defined a "crane" as a (a) tower or hydraulic crane, or power-operated derrick, of any lifting or hoisting capacity, or (b) mobile crane that has a manufacturer's maximum-rated capacity over 10,000 pounds (five tons) and (2) with limited exceptions, required operators of such equipment to be licensed by the state Crane Examiners Board (Crane Board). Beginning October 1, 2014, the act instead, with some exceptions, defines a "crane" as power-operated equipment having a hoisting or lifting capacity of over 2,000 pounds. But operators of cranes, except tower cranes, with a lifting or hoisting capacity between 2,000 and 10,000 pounds do not have to be licensed if such operators are certified by an accredited crane operator testing organization or qualified by an audited employer program or the U.S. military. (The act also exempts operators licensed under state law from licensure. But the legal effect of exempting people from licensure if they are licensed is unclear.)

The act, beginning October 1, 2012, adopts OSHA's standards governing training and supervision of apprentices operating cranes and hoisting equipment. Also, beginning October 1, 2014, it (1) outlines standards applicants for a crane or hoisting equipment operator license must meet and (2) requires such operators to be retested every four years before their license is renewed.

The act narrows an exemption from the crane and hoisting equipment operators' license requirement for people boating or fishing.

Effective October 1, 2012, the act increases, from \$1,000 to \$3,000, the maximum civil fine the Crane Board may impose on crane or hoisting equipment owners or operators who violate the laws or regulations governing them. It prohibits the board from renewing an operator's license or owner's registration until a fine is paid in full.

The act deletes obsolete provisions and makes other technical and conforming changes.

**EFFECTIVE DATE:** October 1, 2012, except the provisions redefining cranes, including exemptions, and pertaining to licensing examinations, take effect October 1, 2014.

# OLR PUBLIC ACT SUMMARY

## DEFINITIONS

Prior law defined a “crane” as a:

1. tower crane used in construction, demolition, or excavation;
2. hydraulic crane;
3. power-operated derrick; or
4. mobile crane, which is a mobile, carrier-mounted, power-operated hoisting machine using a power-operated boom that (a) moves laterally by rotation of the machine on the carrier and (b) has a manufacturer's maximum-rated capacity exceeding five tons (§ 1).

Beginning October 1, 2014, the act broadens the definition of cranes, by adopting OSHA’s definition. It defines a crane as power-operated equipment with a manufacturer’s maximum-rated hoisting or lifting capacity of more than 2,000 pounds that can hoist, lower, and horizontally move suspended loads, including:

1. articulating cranes, such as knuckle-boom cranes;
2. mobile cranes, such as wheel-mounted, rough terrain, all-terrain, commercial truck-mounted, and boom truck cranes;
3. tower cranes such as fixed jib hammerhead boom, luffing boom, and self-erecting cranes;
4. industrial cranes such as carry-deck cranes;
5. crawler, floating, locomotive, pedestal, portal, straddle, side boom, and overhead and gantry cranes;
6. cranes on barges or monorails;
7. multi-purpose machines configured to hoist and lower, by means of a winch or hook, and horizontally move, a suspended load;
8. dedicated pile drivers when used in construction, demolition, or excavation;
9. service or mechanic trucks with a hoisting device;
10. derricks; and
11. variations of the above equipment (§ 2).

By law, “hoisting equipment” is any motorized equipment:

1. used in construction, demolition, or excavation;
2. used at construction sites for projects, other than ones involving residential structures under four stories, with an estimated cost of over \$1.25 million; and
3. with a manufacturer's rated (a) hoisting capacity of over five tons and (b) maximum reach of over 32 feet.

The act specifies that such equipment does not include cranes (§ 2).

### *Exemptions*

The act exempts from the laws governing cranes and hoisting equipment operators and operations:

1. cranes and hoisting equipment, as defined in the act, when converted or adapted for nonhoisting or nonlifting use, including power shovels, excavators, and concrete pumps;
2. power shovels, excavators, wheel loaders, backhoes, loader backhoes, and

## OLR PUBLIC ACT SUMMARY

- track loaders, including such machinery being used with chains, slings, or other rigging to lift suspended loads;
3. wreckers and tow trucks, including rotators registered as wreckers operated by a licensed motor vehicle dealer or repairer and used to clear wrecks and tow vehicles as specified in the act;
  4. digger derricks augering (digging) holes for poles carrying electric and telecommunication lines, placing and removing the poles, and handling material to be installed on or removed from the poles;
  5. machinery originally designed as vehicle-mounted aerial devices for lifting personnel and self-propelled elevating work platforms;
  6. telescopic or hydraulic gantry systems;
  7. stacker and helicopter cranes;
  8. powered industrial forklifts, except when configured to hoist and lower, by means of a winch or hook, and horizontally move a suspended load;
  9. mechanic trucks with a hoisting device when used in activities related to equipment maintenance and repair;
  10. machinery that hoists by using a come-a-long or chain fall;
  11. gin poles when used for erecting communication towers;
  12. anchor handling or dredge-related operations with a vessel or barge using an affixed A-frame;
  13. roustabouts;
  14. propane service vehicles equipped with a crane to load or offload Department of Transportation-approved propane tanks or American Society of Mechanical Engineers-approved propane tanks having a capacity of 2,000 gallons or less;
  15. overhead and gantry cranes when used for non-construction-related work;
  16. dedicated drill rigs; and
  17. articulating or knuckle-boom truck cranes that deliver material to construction sites when used to transfer (a) material from the truck crane to the ground without arranging the material in a particular sequence for hoisting or (b) building supply sheet goods or packaged material (such as sheets of sheetrock or plywood, rolls of roofing felt, or bags of cement), provided the truck crane is equipped with a properly functioning automatic overload prevention device (§ 3).

The exclusion for articulating or knuckle-boom truck cranes does not apply when the crane is:

1. used to hold, support, or stabilize material to facilitate a construction activity, such as holding material in place while it is attached to the structure;
2. handling prefabricated material such as precast concrete members or panels, roof trusses, prefabricated building sections such as floor, wall, or roof panels, roof structures, or similar items;
3. handling structural steel members such as joists, beams, columns, and steel decking or a component of a systems-engineered metal building; or

## OLR PUBLIC ACT SUMMARY

4. performing activities not otherwise excluded under the act (§ 3).

### LICENSURE

By law, crane and hoisting equipment operators must be licensed, unless exempt, and apprentices and crane owners (but not hoisting equipment owners) must be registered by the Crane Board, which is in the Department of Construction Services (DCS).

The law exempts from licensure and registration requirements for cranes and hoisting equipment (1) people engaged in agriculture or arboriculture; (2) engineers under federal jurisdiction; (3) engineers or operators employed by public utilities or industrial manufacturing plants; and (4) anyone operating a bucket truck or a digger derrick designed and used for an electrical generation, transmission, distribution, catenary (overhead lines above railroad tracks), or signalization project if the person:

1. holds a valid Connecticut limited electrical line contractor or journeyman's license;
2. has more than 1,000 hours of experience installing electrical lines; or
3. has enrolled in, or graduated from, a federally recognized electrical apprenticeship program.

Prior law also exempted people engaged in boating and fishing from licensure requirements for cranes and hoisting equipment. Effective October 1, 2014, the act narrows this exemption to people in the recreational boating or fishing industry, except when they are engaged in construction-related work. The act additionally exempts people engaged in activities or using equipment excluded from its definition of cranes and hoisting equipment (§§ 8 & 10).

The act also exempts from crane licensing and registration requirements people operating equipment, except tower cranes, that can hoist, lower, and horizontally move a suspended load and has a manufacturer's maximum-rated hoisting or lifting capacity of over 2,000 and up to 10,000 pounds and who, under federal OSHA, are (1) certified by an accredited crane operator testing organization, (2) qualified by an audited employer program, (3) qualified by the U.S. military, or (4) licensed under the laws governing cranes and hoisting equipment (§ 10).

#### *Qualifications for Licensure*

Before October 1, 2014, when the new definition of crane takes effect, the act allows the board to develop and administer written and practical examinations for, and issue licenses to operators of cranes meeting the new definition, including those with a lifting capacity over 2,000 pounds and up to 10,000 pounds (§ 5). The act specifies that these provisions should not be construed to eliminate licensure requirements in effect before October 1, 2014 for operators of cranes or hoisting equipment meeting the current definition.

By law, the DCS commissioner, with the Crane Board's advice and assistance, adopts regulations specifying qualifications for licensure, examination requirements, and licensing procedures for crane and hoisting equipment

## OLR PUBLIC ACT SUMMARY

operators. The board administers and establishes passing grades for licensure examinations and issues licenses for such operators.

### *Written Examination*

Under prior law, the licensure examination could be written, practical, or both. Effective October 1, 2014, the act (§ 6(a)) requires both a practical and written examination, thereby conforming the law to regulations (Conn. Agencies Regs. §§ 29-223-2a & 29-223-15a). It (§ 6(b)) requires the written examination to determine whether an applicant knows the information necessary to safely operate the specific type of crane or hoisting equipment that he or she will operate, including:

1. the controls and operational or performance characteristics of the equipment;
2. how to use and calculate, manually or with a calculator, load or capacity information on a variety of configurations of the equipment;
3. how to prevent and respond to power line contact;
4. technical knowledge of (a) site information, (b) operations, and (c) load information pertaining to the specific type of equipment he or she will operate; and
5. technical knowledge of site suitability, hazards, and access.

The written examination must also determine whether the applicant can read and find relevant information in the equipment manual and other material.

### *Practical Examination*

The act requires the practical examination to determine if an applicant has the skills necessary to safely operate the crane or hoisting equipment, including how to (1) recognize by sight and sound all items required in a shift inspection; (2) apply load chart information; and (3) operate, maneuver, and safely shut down and secure the equipment (§ 6 (c)).

### *License Validity and Renewal*

Under current regulations, which the act codifies, a crane operator or hoisting equipment operator's license is valid for two years (Conn. Agencies Regs. §§ 29-223-4a & 22-223-16a). The act requires licensees to take and pass a board examination every four years to ensure that they still have the technical knowledge and skill to operate cranes or hoisting equipment, as applicable (§ 6).

## CRANE AND HOISTING OPERATOR APPRENTICESHIPS

Prior law defined an “apprentice” as anyone registered with the Crane Board to learn to operate cranes or hoisting equipment. The act instead defines an apprentice as someone who has filed a license application and whose employer has registered him or her with the board to learn to operate such equipment under the direct supervision of a licensed operator in accordance with the act (§ 1).

By law, apprentices must be supervised by a licensed operator. The act specifies that the supervision for crane apprentices must be direct, the same

## OLR PUBLIC ACT SUMMARY

standard that currently applies to hoisting equipment apprentices (§ 9).

Effective October 1, 2012, the act requires that, in addition to complying with existing standards, crane and hoisting equipment operators must comply with the standards governing apprenticeships outlined in the act and described below (§§ 7, 9, & 13).

### *Supervision*

The act adopts OSHA's standards for supervising apprentices operating cranes or hoisting equipment (29 CFR § 1926.1427). Many of these standards already apply under state regulations (Conn. Agencies Reg. § 29-223-17a).

Specifically, the act requires employers to train apprentices sufficiently before they start operating a crane or hoisting equipment to enable them to operate it safely under the limitations established by the act and any limitations established by an employer. It requires apprentices operating such equipment to be capable of doing the tasks they are performing.

While operating any such equipment, the apprentice must be continuously monitored by an individual who:

1. is employed by or an agent of the apprentice's employer;
2. holds a valid Connecticut crane or hoisting equipment operator's license;
3. is not performing any task that detracts from his or her ability to monitor the apprentice;
4. for tower cranes, is in direct communication with the apprentice; and
5. for other equipment, is in direct line of sight of the apprentice and communicates with him or her orally or by hand signals.

The act allows the supervisor to take one 15-minute break per hour, provided before doing so he or she informs the apprentice of the specific tasks to be performed and limitations that apply and the apprentice can perform the tasks.

### *Prohibited Equipment Operation*

The act prohibits apprentices from operating equipment in any of the following circumstances:

1. any part of the equipment, load line, or load, including rigging and lifting accessories, if operated at the equipment's maximum working radius, would get within 20 feet of a power line of 350 kilovolts (i.e., 350,000 volts) or less, or within 50 feet of a power line over 350 kilovolts;
2. the equipment is used to hoist personnel;
3. in multiple equipment lifts;
4. the equipment is used over a shaft or cofferdam or in a tank farm; or
5. in multiple-lift rigging operations, unless the supervisor determines that the apprentice is sufficiently skilled.

The act increases, from \$1,000 to \$3,000, the maximum civil fine the Crane Board may impose on crane or hoisting equipment owners or operators who violate the laws or regulations governing them. It prohibits the board from renewing the operator's license or owner's registration until the fine is paid in full.

OLR PUBLIC ACT SUMMARY

OLR Tracking: VR:JM:PF:ts/ro/eh