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## **OLR Bill Analysis**

### **sSB 323**

#### ***AN ACT CONCERNING CRANE OPERATIONS.***

#### **SUMMARY:**

This bill 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 the bill's provisions codify current state regulations.

The bill adopts OSHA's definition of crane, thereby extending state regulation, including licensing and training requirements, to equipment with a lifting capacity of over 2,000 pounds, instead of over five tons (i.e., 10,000 pounds). It exempts from the licensure requirement for crane operators, operators of equipment with a lifting capacity between 2,000 and 10,000 pounds if they are certified by an accredited crane operator testing organization or qualified by an audited employer program or the U.S. military.

The bill (1) adopts OSHA's standards governing hoisting equipment apprenticeships, including prohibited practices and the level and nature of supervision; (2) sets standards applicants for a crane or hoisting equipment operator license must meet; and (3) requires such operators to be retested every four years.

The bill also increases, from \$1,000 to \$3,000, the maximum civil fine the Crane Examiners Board may impose on crane or hoisting equipment owners or operators who violate the law or regulations.

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

EFFECTIVE DATE: October 1, 2012

#### **DEFINITIONS**

Under current law, a “crane” means 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.

The bill broadens the definition of cranes, by adopting OSHA’s definition. It defines a “crane” as power-operated equipment that (1) can hoist, lower, and horizontally move a suspended load and (2) has a manufacturer’s maximum rated hoisting or lifting capacity of more than 2,000 pounds, including,:

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

7. variations of the above equipment.

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 over five tons and (b) maximum reach over 32 feet.

### **Exemptions**

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

1. 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 bill;
2. digger derricks augering (digging) holes for poles carrying electric telecommunication lines, placing and removing the poles, and handling material to be installed on or removed from the poles;
3. machinery originally designed as vehicle-mounted aerial devices for lifting personnel and self-propelled elevating work platforms;
4. telescopic or hydraulic gantry systems;
5. stacker and helicopter cranes;
6. powered industrial forklifts, except when configured to hoist and lower, by means of a winch or hook, and horizontally move, a suspended load;
7. mechanic trucks with a hoisting device when used in activities

- related to equipment maintenance and repair;
8. machinery that hoists by using a come-a-long or chain fall;
  9. gin poles when used for erecting communication towers;
  10. anchor handling or dredge-related operations with a vessel or barge using an affixed A-frame;
  11. roustabouts;
  12. 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; and
  13. certain articulating or knuckle-boom truck cranes that deliver material to construction sites when used to transfer (1) material from the truck crane to the ground without arranging the material in a particular sequence for hoisting or (2) building supply sheet goods or packaged material, provided the truck crane is equipped with a properly functioning automatic overload prevention device.

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 a prefabricated component 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 a structural steel member such as joists, beams, columns, and steel decking or a component of a systems-engineered metal building; or

4. performing activities not otherwise excluded under the bill.

## **LICENSURE**

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

Current law exempts from licensure and registration requirements pertaining to cranes (1) engineers under U.S. jurisdiction; (2) engineers or operators employed by public utilities or industrial manufacturing plants; and (3) people engaged in boating, fishing, agriculture, or arboriculture. It also exempts 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 state-issued 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.

The bill additionally exempts from licensure and registration people engaged in activities or using equipment excluded under the bill. It also exempts operators of cranes with a manufacturer's maximum-rated hoisting or lifting capacity 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, or (3) qualified by the U.S. military.

### ***Qualifications for Licensure***

By law, the Department of Emergency Services and Public Protection commissioner, with the Crane Examiners Board's advice

and assistance, must adopt regulations specifying license qualifications, examination requirements, and licensing procedures for crane and hoisting equipment operators. Under current law, the licensure examination may be written, practical, or both. The bill requires both a practical and written examination, thereby conforming the law to regulations (Conn. Agencies Reg. §§ 29-223-2a & 29-223-15a).

### ***Written Examinations***

Under the bill, the written examination must 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.

### ***Practical Examination***

The bill 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.

### ***License Validity***

Under current regulations, which the bill 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 bill requires licensees to take and pass a board examination every four years to ensure that they have the technical knowledge and skill to operate cranes or hoisting equipment, as applicable.

## **CRANE AND HOISTING OPERATOR APPRENTICESHIP STANDARDS**

Under current law, apprentices must be supervised by a licensed operator. The bill specifies that the supervision must be direct.

The bill requires that, in addition to complying with existing standards, crane and hoisting equipment operators must comply with the standards governing apprenticeship outlined in the bill and described below.

### ***Supervision***

The bill adopts OSHA's standards for (1) supervising apprentices and (2) operating cranes and hoisting equipment (29 CFR § 1926.1427). Many of these standards already apply under state regulations (Conn. Agencies Reg. § 29-223-17a).

Specifically, the bill requires employers to train apprentices sufficiently before they start operating a crane or hoisting equipment to enable them to operate it safely. 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 bill allows the supervisor to take one 15-minute break per hour, provided before doing so, (1) he or she informs the apprentice of the specific tasks the apprentice must perform and limitations that apply and (2) the apprentice can perform them.

### ***Equipment Operation***

The bill 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 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.

### **VIOLATIONS AND PENALTIES**

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

### **COMMITTEE ACTION**

Public Safety and Security Committee

Joint Favorable Substitute

Yea 22 Nay 0 (03/15/2012)