2023 CT License Renewal Part II



U.S. DEPARTMENT OF LABOR

Top 10 OSHA Violations of 2021

OSHA's General Duty Clause requires employers to provide a work environment free from known hazards that can cause death or serious injury. Industryspecific OSHA standards including those for general industry, shipyards, longshoring, and construction — can be found on OSHA's website.



10. Machinery & Machine Guarding (1910.212)

2020 # 10 with 1313 Violations

2021 # 10 with 1105 Violations

<u>1910.212(a)</u> Machine guarding.

<u>1910.212(a)(1)</u>

Types of guarding. One or more methods of machine guarding shall be provided to protect the operator and other employees in the machine area from hazards such as those created by point of operation, ingoing nip points, rotating parts, flying chips and sparks. Examples of guarding methods are-barrier guards, two-hand tripping devices, electronic safety devices, etc.

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OUCHIES

9. Powered Industrial Trucks (1910.178)

<u>1910.178(a)</u> General requirements. <u>1910.178(a)(1)</u>

This section contains safety requirements relating to fire protection, design, maintenance, and use of fork trucks, tractors, platform lift trucks, motorized hand trucks, and other specialized industrial trucks powered by electric motors or internal combustion engines. This section does not apply to compressed air or nonflammable compressed gas-operated industrial trucks, nor to farm vehicles, nor to vehicles intended primarily for earth moving or over-the-road hauling.

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2020 was #7 with 1932 Violations

2021 only 1404 Violations



8. Personal Protective and Life Saving Equipment-Eye and Face Protection (1926.102)

<u>1926.102(a)</u> General requirements.

<u>1926.102(a)(1)</u>

The employer shall ensure that each affected employee uses appropriate eye or face protection when exposed to eye or face hazards from flying particles, molten metal, liquid chemicals, acids or caustic liquids, chemical gases or vapors, or potentially injurious light radiation.

<u>1926.102(a)(2)</u>

The employer shall ensure that each affected employee uses eye protection that provides side protection when there is a hazard from flying objects. Detachable side protectors (e.g. clip-on or slide-on side shields) meeting the pertinent requirements of this section are acceptable. 8. Personal Protective and LifeSaving Equipment-Eye and FaceProtection (1926.102)

2020 was # 9 with 1369 Violations BUT now in 2021 increased to 1451 Violations and moved up 1 spot!!

7. Fall Protection – Training Requirements (1926.503)

<u>1926.503(a)</u>

"Training Program."

<u>1926.503(a)(1)</u>

The employer shall provide a training program for each employee who might be exposed to fall hazards. The program shall enable each employee to recognize the hazards of falling and shall train each employee in the procedures to be followed in order to minimize these hazards. In 2020 was # 8 with 1621 Violations

However 2021 moved up 1 spot to # 7 with 1660 Violations

6. Control of Hazardous Energy LOCKOUT/TAGOUT (1910.147)

<u>1910.147(a)</u>

Scope, application, and purpose --

<u>1910.147(a)(1)</u>

Scope

<u>1910.147(a)(1)(i)</u>

This standard covers the servicing and maintenance of machines and equipment in which the unexpected energization or start up of the machines or equipment, or release of stored energy, could harm employees. This standard establishes minimum performance requirements for the control of such hazardous energy.

In 2020 was #6 with 2065 Violations

In 2021 remained # 6 although violations decreased to 1670 Violations

5. Hazard Communications

(1910.134)

<u>1910.1200(a)</u>

Purpose.

<u>1910.1200(a)(1)</u>

The purpose of this section is to ensure that the hazards of all chemicals produced or imported are classified, and that information concerning the classified hazards is transmitted to employers and employees. The requirements of this section are intended to be consistent with the provisions of the United Nations Globally Harmonized System of Classification and Labelling of Chemicals (GHS), Revision 3. The transmittal of information is to be accomplished by means of comprehensive hazard communication programs, which are to include container labeling and other forms of warning, safety data sheets and employee training.

2020 Was # 2 with 3199 Violations

Nice

now in 2021 moved to #5 as there were now 1939 Violations

4. Scaffolding



This section does not apply to aerial lifts, the criteria for which are set out exclusively in 1926.453.

<u>1926.451(a)</u>

"Capacity"

1926.451(b)

"Scaffold platform construction."

<u>1926.451(c)</u>

"Criteria for supported scaffolds."

1926.451(d)

"Criteria for suspension scaffolds."

<u>1926.451(e)</u>

"Access." This paragraph applies to scaffold access for all employees. Access requirements for employees erecting or dismantling supported scaffolds are specifically addressed in paragraph (e)(9) of this section.

<u>1926.451(f)</u>

"Use."

<u>1926.451(g)</u> "Fall protection."

<u>1926.451(h)</u>

1926.451(f)(6)

The clearance between scaffolds and power lines shall be as follows: Scaffolds shall not be erected, used, dismantled, altered, or moved such that they or any conductive material handled on them might come closer to exposed and energized power lines than as follows:

*Insulated Lines



*Uninsulated lines



Remains at # 4 In 2020 had 2,538 VIOLATIONS

In 2021 only 1,943 Violations

3. Ladders

(1926.1053)

<u>1926.1053(a)</u>

General. The following requirements apply to all ladders as indicated, including job-made ladders.

Went from # 5 in 2020 with 2129 Violations to # 3 in 2021 with 2,018 Violations

2. Respiratory Protection

(1910.134)

This section applies to General Industry (part 1910), Shipyards (part 1915), Marine Terminals (part 1917), Longshoring (part 1918), and Construction (part 1926).

<u>1910.134(a)</u>

Permissible practice.

<u>1910.134(a)(1)</u>

In the control of those occupational diseases caused by breathing air contaminated with harmful dusts, fogs, fumes, mists, gases, smokes, sprays, or vapors, the primary objective shall be to prevent atmospheric contamination This shall be accomplished as far as feasible by accepted engineering control measures (for example, enclosure or confinement of the operation, general and local ventilation, and substitution of less toxic materials). When effective engineering controls are not feasible, or while they are being instituted, appropriate respirators shall be used pursuant to this section.

Rose to # 2 in 2021 2020 had 2,649 Violations

2021 had 2,521 Violation

1. Duty to have Fall Protection (1926.501)

- 1926.501(a) "General."
- 1926.501(a)(1)

This section sets forth requirements for employers to provide fall protection systems. All fall protection required by this section shall conform to the criteria set forth in 1926.502 of this subpart.

2020 Number 1 with 5,424 Violations

2021

5,271 Violations

Competent Person

The term "Competent Person" is used in many OSHA standards and documents. An OSHA "competent person" is defined as "one who is capable of identifying existing and predictable hazards in the surroundings or working conditions which are unsanitary, hazardous, or dangerous to employees, and who has authorization to take prompt corrective measures to eliminate them" [29 CFR 1926.32(f)]. By way of training and/or experience, a competent person is knowledgeable of applicable standards, is capable of identifying workplace hazards relating to the specific operation, and has the authority to correct them. Some standards add additional specific requirements which must be met by the competent person.

ANSI defines a competent person as "an individual designated by the employer to be responsible for the immediate supervision, implementation, and monitoring of the employer's managed fall protection program who, through training and knowledge, is capable of identifying, evaluating, and addressing existing and potential fall hazards, and who has the employer's authority to take prompt, corrective action with regards to such hazards."

Qualified Person

<u>1926.32(m)</u>

Qualified means one who, by possession of a recognized degree, certificate, or professional standing, or who by extensive knowledge, training, and experience, has successfully demonstrated his ability to solve or resolve problems relating to the subject matter, the work, or the project.

ANSI defines a qualified person as "a person with a recognized degree or professional certificate and with extensive knowledge, training, and experience in the fall protection and rescue field who is capable of designing, analyzing, evaluating, and specifying fall protection and rescue systems to the extent required by this standard."

PART III

2020 CHANGES

Many changes occur when a new code is written and adopted.

These may be

- adding verbiage or
- deleting verbiage for clarification or
- rewriting or relocating definitions or
- adding or deleting articles

So how YOU identify what has changed?

The 2020 NEC® includes revision symbols identifying changes from the previous edition.

Text revisions are shaded.

A Δ before a section number indicates that words within that section were deleted and a Δ to the left of a table or figure number indicates a revision to an existing table or figure.

When a chapter was heavily revised, the entire chapter is marked throughout with the Δ symbol.

Where one or more sections were deleted, a • is placed between the remaining sections.

Chapters, annexes, sections, figures, and tables that are new are indicated with an N.

2020 CODE ARRANGEMENT

This *Code* is divided into the introduction and nine chapters, as shown in Figure 90.3.



Chapters 1, 2, 3, and 4 apply generally. Chapters 5, 6, and 7 apply to special occupancies, special equipment, or other special conditions and may supplement or modify the requirements in Chapters 1 through 7

Chapter 8 covers communications systems and is not subject to the requirements of Chapters 1 through 7 except where the requirements are specifically referenced in Chapter 8.

Chapter 9 consists of tables that are applicable as referenced. Informative annexes are not part of the requirements of this *Code* but are included for informational purposes only.

2020 Code Changes

MAJOR 2020 NEC CODE CHANGES

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GFCI (DWELLINGS) 210.8(A)
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GFCI protection is required for all 125–250V receptacles within 6 feet of sinks. Notable spaces include:

Laundry areas Kitchens Unfinished basements Finished basements Outdoor outlets 150V to ground or less and up to 50amps This applies to:

Ranges within 6 feet of sinks **Electric dryers** Dishwashers Sump pumps Pool motors Equipment that requires service, including HVAC and refrigeration units



GFCI protection is also required in nondwellings.210.8(B) Notable spaces include:

- Indoor damp and wet locations
- Permanent fixtures for cooking
- Permanent provisions for food preparation Accessory buildings

Emergency Disconnects

Required for all single- and two-family dwellings Must function from outside dwellings Must be readily accessible Applies to generators and energy storage systems (ESS) Generators must be marked with one of the following: EMERGENCY DISCONNECT, SERVICE DISCONNECT EMERGENCY DISCONNECT, METER DISCONNECT, NOT SERVICE EQUIPMENT

- Surge Protection
- New article (242) includes service lines to dwelling units
- Must be part of service equipment or adjacent
- May be located at each level of downstream distribution

In the 2020 NEC, a Type 1 or Type 2 surge protective device (SPD) will be required for dwelling unit services. The SPD may be integral to or adjacent to the electrical service. Additionally, an SPD will be required when an existing service is replaced. Now applies to:

Line side and load side services Replacements and service upgrades



New in the 2020 NEC





Type 1 or Type 2 Surge Protector

Did you know that the average home has an estimated \$15,000 worth of equipment that can be damaged by surges?

1000Bulbs

- Solar (California)
- Solar panels on new construction* Outdoor disconnect required for all energy storage units

*The State of California requires solar photovoltaic systems for newly constructed healthcare facilities starting January 1, 2020

New & Removed Articles

NEC 2020 includes several new articles. Surge protection article 242 is one among four. Article 242 Overvoltage Protection combines articles 280 and 285 and addresses surge protective requirements, devices and arresters. NEC 2020 removes several articles present in NEC 2017 to improve clarity and limit redundancies. These are:

Article 280 SPDs over 1,000V Article 285 SPDs 1,000V or less Article 328 MV Cable Type MV Article 553 Floating Buildings Article 337 Type P Cable addresses 600V Type P cables used in industrial and hazardous areas and specifications. Article 311 MV Conductors & Cable expands on deleted article 328 and addresses medium voltage conductors and cables, their use and specifications.

Article 800 General Requirements for Communications Systems consolidates the previous contents of 2017 NEC chapter 8 into one articles and addresses requirements for communication circuits, including television and radio distribution antennae and network

To Be Continued....

With 3 hours of 2020 NEC Code Changes