



# OSHA and Your CMMS: Steps to Compliance Readiness



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# CHAPTER 1

## Introduction

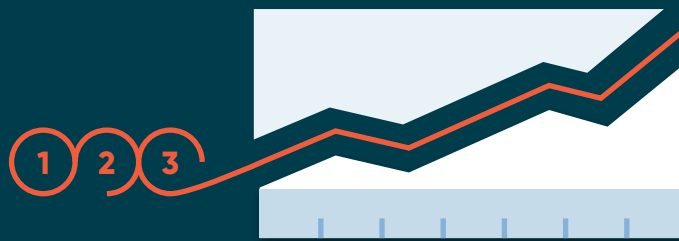


Started in 1970, the Occupational Safety and Health Administration has worked hand in hand with the Department of Labor to conduct thousands of workplace assessments every year. Last year, they had almost 76,000 inspections at both the state and federal level. With the new regulations and guidelines set forth by OSHA, from 1970 to 2015 the number of work-related deaths has decreased from 38 workers per day to 13 a day, and injuries or illnesses have been reduced from about 10 in 100 workers to just 3.9 in 100.<sup>1</sup>

Despite the vast improvements in how employers approach safety for their workforce, injuries, deaths and violations still occur. Last year, the U.S. Bureau of Labor Statistics reported that there were 5,190 fatal work injuries recorded – up seven percent from 2015.<sup>2</sup> On top of the financial and personal costs, you can also suffer a blow to your reputation as an employer. No one wants to be known as a manufacturer who is unable to provide a safe working environment to their workforce. However, there are some key ways that you can prevent a citation altogether. To support your team's efforts, a computerized maintenance management system (CMMS) can make a big difference.

# CHAPTER 2

## Top 3 Ways Your CMMS Supports Compliance



Compliance doesn't happen overnight, but continuous improvement processes and leveraging a CMMS can make passing inspections and fostering a safe work environment a lot more seamless. Here are the top three ways you can use your CMMS to stay compliant, boost morale and avoid costly fines.



## 1. Documentation

One of the most vital uses of a CMMS for compliance is documentation. Paper binders are no longer the go-to for documentation in today's digital world, and there's good reason for that. They don't scale to your needs, they're costly and often difficult to update, and distributing them can be a challenge. With a good CMMS, technicians can have all the documentation they need at their fingertips on a mobile device.

Whether they need the task list for their work order to ensure the proper steps, knowledge of where to get parts or equipment needed for their job, or are re-reading the Job Safety Analysis (JSA) instructions for their work, documentation is essential. From Safety Data Sheets (SDS) to Personal Protective Equipment (PPE), you can list all vital information in a central, easy-to-update location.

## 2. Training

Training records need to be at your fingertips to make sure you're creating a safe workplace. A CMMS can help you not only store those records for easy access, but remind you when to look over

the records, when certifications expire and much more. A maintenance manager can easily assign work to the right people when they have personnel data, such as certifications and their expiration dates, available right as they're scheduling the day's work orders. The system can also help in identifying gaps, allowing you to assign work properly and discover opportunities for training.

## 3. Tracking

Finally, it's essential to track the work you're doing so that you can pinpoint any issues to a certain date, time or job owner. Powerful CMMS systems will make sure that any changes that are made in the system are logged so you can easily access a history of exactly what was done, who did it, which fields were changed and when. With tracking, you can also identify root cause problems to help modify your master safety programs effectively, and electronic signatures are crucial not only for compliance but to also create a sense of ownership in your team.

## Tying it Together

Now that you know how your CMMS can support your compliance efforts, it's time to see how to put it all into action – specifically, how to prevent the top 10 OSHA violations for this year.

# CHAPTER 3

## Top 10 OSHA Violations for 2018



OSHA violations are not only costly, but they're listed every year by OSHA because they're so easy to miss. Year over year, the same citations occur, and you'll notice that many of the top five actually never change.

Each year, hundreds of employers receive citations for violating the standards set forth by OSHA. When you receive an OSHA citation, you could find yourself responsible for hefty fees. In 2016, OSHA increased its fees for the first time in 25 years, and each year the fines are adjusted. For this year, they break down their new pay structure as follows:<sup>3</sup>

VIOLATION TYPE(S)	DESCRIPTION	2018 FEE (MAXIMUM)
<b>Serious</b>	A situation that can cause serious injury or death	<b>\$12,934 per violation</b>
<b>Other-Than-Serious</b>	Violation of rules that may not cause injury or death, but still related to safety	
<b>Posting Requirements</b>	Failure to properly post warnings and other signage for a hazard	
<b>Failure to improve</b>	An employer has failed to fix an issue by the deadline given by OSHA until it's fixed	<b>\$12,934 per day beyond the abatement date</b>
<b>Willful</b>	Intentional disregard for employee safety	<b>\$129,336 per violation</b>
<b>Repeated</b>	When an employer has already been cited for a violation and is penalized again for a similar or the same citation	

## Top 10 OSHA Violations for 2018

1. Fall protection
2. Hazard communication standard
3. Scaffolding
4. Respiratory protection
5. Control of hazardous energy
6. Ladders
7. Powered industrial trucks
8. Machinery and machine guarding
9. Fall protection – training requirements
10. Electrical, wiring methods, components and equipment



# 1. Fall Protection

## WHAT OSHA SAYS

“This section requires employers to provide protection for each employee exposed to fall and falling object hazards.” (1926.501)<sup>4</sup>

Falls are the third most common cause of injury or death in the workplace (behind homicides and transportation incidents), so it’s no wonder that it’s consistently number one on OSHA’s violation list. In 2016, a total of 849 falls, slips or trips occurred.<sup>2</sup>

## WHAT TO LOOK FOR

To protect against falls, OSHA suggests that you keep a vigilant eye out for any potential falling hazard. Some common ones include floor holes, guard rails, toe-boards, harnesses, safety nets, railings and more. OSHA’s guidelines also include:<sup>5</sup>

- › Removing all known dangers in the workplace
- › Maintain floors in a clean and dry condition (as much as possible)
- › Provide required PPE to employees
- › Offer training about potential hazards

[Check out their topic page](#) / [Read the full rules here](#)

## USE YOUR CMMS

- › Document all slips, trips or falls
- › Immediately identify any hazards and create a work order to fix it
- › Track and sign off on fixing the issue
- › Train your employees on the proper protocols for maintenance and identifying a hazard





## 2. Hazard Communication

### WHAT OSHA SAYS

“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.” (1910.1200)<sup>6</sup>

If you're working with hazardous materials, OSHA requires you to classify them accordingly, including both imported and produced materials. In particular, when classifying such materials you must ensure that you are using the naming conventions standardized in United Nations Globally Harmonized System of Classification and Labelling of Chemicals (GHS), Revision 3.<sup>6</sup>

### WHAT TO LOOK FOR

All manufacturers that produce hazardous chemicals, or even have them in their facility, are required to have labels and safety data sheets plus proper training. The OSHA standards are two-fold:<sup>7</sup>

1. Chemical manufacturers and importers must evaluate the hazards of the chemicals they use, and have labels that alert customers of this information
2. All workplaces with hazardous chemicals are required to provide labels and SDS to their workers as well as offer training on chemical handling

In addition, OSHA regularly updates their requirements for these safety procedures, including the type of label, the format of the data sheets and more, making it even more important to use your CMMS to update these documents as needed.<sup>8</sup>

[Check out their topic page](#) / [Read the full rules here](#)

### USE YOUR CMMS

- › Ensure that everyone has been trained on chemical handling
- › Keep all SDS in your CMMS for easy electronic updating
- › Require electronic signatures for both training and labelling



# 3. Scaffolding

## WHAT OSHA SAYS

“...each scaffold and scaffold component shall be capable of supporting, without failure, its own weight and at least four times the maximum intended load applied or transmitted to it.” (1926.451)<sup>9</sup>

Scaffolding is a hazard that particularly affects the construction industry, but it’s worth noting if you have any construction going on around your facility, even if it’s contractors, to keep your employees safe.

## WHAT TO LOOK FOR

OSHA has specific rules on how scaffolding is designed, used and built plus how to protect against falling objects, structural instability, electrocution and overloading.<sup>10</sup> And, it should be no surprise that OSHA emphasizes that your scaffolding needs to have safeguards against worker falls, too.

[Check out their topic page](#) / [Read the full rules here](#)

## USE YOUR CMMS

- › Ensure that everyone has been trained on scaffolding regulations
- › Obtain electronic signatures from contractors for safety regulations



## 4. Respiratory Protection

### WHAT OSHA SAYS

“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. (1910.134)<sup>11</sup>

Yes, this might be a no-brainer: Breathing in hazardous fumes is bad for your health. But just like with hazard communication, if you produce or handle any toxic chemicals, there’s a potential for a violation. According to OSHA, this guideline affects approximately five million employees in over 1 million workplaces.<sup>12</sup>

### WHAT TO LOOK FOR

The toxic fumes that OSHA mentions in this citation cause “hundreds of deaths and thousands of illnesses annually.”<sup>12</sup> OSHA stresses that respiratory protection plays a key role in preventing these injuries and fatalities and describes the type of respirators that are needed, such as particulate and airline categories.<sup>12</sup>

[Check out their topic page](#) / [Read the full rules here](#)

### USE YOUR CMMS

- › Ensure that everyone has been trained on proper PPE
- › Keep a list of all required PPE



# 5. Control of Hazardous Energy (LOTO)

## WHAT OSHA SAYS

“This standard covers the servicing and maintenance of machines and equipment in which the unexpected energization or startup 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.” (1910.147)<sup>13</sup>

Hazardous energy can be released during an unexpected startup or “release” of energy during routine maintenance.<sup>14</sup> It can include electrical, mechanical, hydraulic, thermal and other sources, and the injuries caused range from burns to lacerations or fractures.<sup>14</sup>

## WHAT TO LOOK FOR

Lockout/tagout (LOTO) practices are key here. In addition to training employees on procedures for controlling hazardous energy on all equipment, employees need to also know what to do if a hazardous energy event does occur.<sup>14</sup>

[Check out their topic page](#) / [Read the full rules here](#)

## USE YOUR CMMS

- › Ensure that everyone has been trained on procedures and regulations with regular refresher courses





## 6. Ladders

### WHAT OSHA SAYS

“The following requirements apply to all ladders as indicated, including job-made ladders. Ladders shall be capable of supporting [specified loads] without failure.” (1926.1053) <sup>15</sup>

Bumped up from number seven last year, this protocol breaks down weight bearing requirements by ladder type, i.e. self-supporting or portable. There’s a theme here: If an elevated element exists, and employees are traversing it, it’s the duty of all employers to make sure these pathways are stable, non-slip and secure.

### WHAT TO LOOK FOR

While OSHA does cover the construction and placement of ladders, the main focus here is on fall protection. OSHA has a detailed list of guidelines for ladders, including how to maintain them, position them when in use and more.<sup>16</sup>

[Check out their topic page](#) / [Read the full rules here](#)

### USE YOUR CMMS

- › Ensure that everyone has been trained on procedures and regulations
- › Require review of the safety steps before the work is started

# 7. Powered Industrial Trucks

## WHAT OSHA SAYS

“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.” (1910.178)<sup>17</sup>

Whether you have forklifts, tractors or platform lifts, this section covers industrial trucks. Not to be confused with trucks driven on the road, this specifically refers to the carriers used within a factory or on the plant floor.

## WHAT TO LOOK FOR

Between work environment and the type of truck that’s used, a lot of these rules for this standard are situational and depend on the circumstance. A forklift that’s used in a warehouse, for example, will have to worry about different operating and workplace hazards than a counterbalanced high-lift rider truck. Be sure to read what each truck requires OSHA’s site.<sup>18</sup>

[Check out their topic page](#) / [Read the full rules here](#)



## USE YOUR CMMS

- › Ensure that everyone has the proper licenses and certifications to operate safely





## 8. Machinery and Machine Guarding

### WHAT OSHA SAYS

“Safeguards are essential for protecting workers from these preventable injuries. Any machine part, function or process that may cause injury must be safeguarded. When the operation of a machine or accidental contact injure the operator or others in the vicinity, the hazards must be eliminated or controlled.” (1910.212)<sup>19</sup>

You no doubt have machinery in your facility, so this violation is of particular significance to manufacturers. While machines often come with machine guarding, it’s important to maintain this protection long after you purchase the equipment.

### WHAT TO LOOK FOR

Machines can, of course, be extremely dangerous when in operation, so OSHA goes into great detail about the types of guarding that is needed as well as a thorough list of all the machinery types that will require this protection for workers. If you have any of the machines on the list, be sure that your standards are up to OSHA regulation. Essentially, if it can cause an injury, it has to be safeguarded correctly.<sup>20</sup>

[Check out their topic page](#) / [Read the full rules here](#)

### USE YOUR CMMS

- › Ensure your task list is up to date with the proper safety steps for entering and exiting guarded areas when performing maintenance



# 9. Fall Protection – Training Requirements

## WHAT OSHA SAYS

“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.” (1926.503)<sup>21</sup>

A new addition to the top 10 OSHA violations list, this specifically refers to how employers train their employees on falling hazards, including protection systems and how to install and use them.

## WHAT TO LOOK FOR

Training certifications are needed to make sure that employees receive the best, detailed education. Make sure that all employees are trained in detail on:<sup>5</sup>

- › Fall hazards
- › Protection systems and how to use them
- › The role of employees in fall protection
- › And more

[Check out their topic page](#) / [Read the full rules here](#)

## USE YOUR CMMS

- › Ensure that everyone has been trained on procedures and regulations with regular refresher courses
- › Monitor and update all certifications



# 10. Electrical, Wiring Methods, Components and Equipment

## WHAT OSHA SAYS

“Working with electricity can be dangerous. Engineers, electricians, and other professionals work with electricity directly, including working on overhead lines, cable harnesses, and circuit assemblies. Others, such as office workers and sales people, work with electricity indirectly and may also be exposed to electrical hazards.” [\(1910.305\)](#)<sup>22</sup>

This particular citation encompasses several aspects of wiring, from cable sheaths to Christmas lights.<sup>17</sup> The big takeaway from this protocol is that wiring of any kind needs to be meticulously maintained and properly installed.

## WHAT TO LOOK FOR

The best way to maintain a standard is to start with it right from the beginning, so be sure that any wiring you have, whether it’s on the floor or in the administrative offices, is up to code when you install it. If you’ve ever been in the average office, you know that wires can quickly get out of hand between desktops, phones and more – which is why OSHA has strict regulations. This section is unique because it’s not just restricted to employees working on the floor. OSHA details what exactly you need to do to ensure that electrical currents are contained in your wiring methods, particularly for grounding.<sup>23</sup>

[Check out their topic page](#) / [Read the full rules here](#)

## USE YOUR CMMS

- › Regularly check all electrical wiring with electronic signatures
- › Train employees on the proper way to handle wiring

# CHAPTER 4

## Tying it All Together



It's easy to see that a CMMS ensures you're taking the right steps to get to a safe, compliant workspace. Violations can be expensive, as well. With retraining and the insurance price hikes involved, you could be in for a long-term drain on your resources. When you're fostering a compliant and safe work environment, you're also building trust with your employees and boosting morale on top of the obvious safety benefits. By focusing on compliance and employee safety, you'll attract and retain the best talent.

Whether you're striving to meet ISO Standards, focused on OSHA compliance or ensuring a safe workplace for your employees, you should have a CMMS to support these goals. Dude Solutions' Work & Asset solution supports the documentation, training and tracking necessary to ensure that your team is successfully compliant. With a focus on the challenges and needs that manufacturers have, we can help you prepare for today, tomorrow and well into the future. To learn more, visit us online at [dudesolutions.com](https://dudesolutions.com).

## SOURCES

- 1 “Commonly Used Statistics.” Occupational Safety and Health Administration, 2018. <https://www.osha.gov/oshstats/commonstats.html>
- 2 “Census of Fatal Occupational Injuries Summary, 2016.” Bureau of Labor Statistics, 2017. <https://www.bls.gov/iif/oshcfoi1.htm#2016>
- 3 “OSHA Penalties.” Occupational Safety and Health Administration, 2018. <https://www.osha.gov/penalties/>
- 4 “Safety and Health Regulations for Construction: Duty to Have Fall Protection.” Occupational Safety and Health Administration, 2018. [https://www.osha.gov/pls/oshaweb/owadisp.show\\_document?p\\_table=STANDARDS&p\\_id=10757](https://www.osha.gov/pls/oshaweb/owadisp.show_document?p_table=STANDARDS&p_id=10757)
- 5 “Fall Protection.” Occupational Safety and Health Administration, 2018. <https://www.osha.gov/SLTC/fallprotection/index.html>
- 6 “Occupational Safety and Health Standards: Toxic and Hazardous Substances.” Occupational Safety and Health Administration, 2018. [https://www.osha.gov/pls/oshaweb/owadisp.show\\_document?p\\_table=STANDARDS&p\\_id=10099](https://www.osha.gov/pls/oshaweb/owadisp.show_document?p_table=STANDARDS&p_id=10099)
- 7 “Hazard Communication.” Occupational Safety and Health Administration, 2018. <https://www.osha.gov/dsg/hazcom/index.html>
- 8 “Hazard Communication Standard.” Occupational Safety and Health Administration, 2018. <https://www.osha.gov/Publications/OSHA3514.html>
- 9 “Safety and Health Regulations for Construction: Scaffolds.” Occupational Safety and Health Administration, 2018. [https://www.osha.gov/pls/oshaweb/owadisp.show\\_document?p\\_table=STANDARDS&p\\_id=10752](https://www.osha.gov/pls/oshaweb/owadisp.show_document?p_table=STANDARDS&p_id=10752)
- 10 “Scaffolding.” Occupational Safety and Health Administration, 2018. <https://www.osha.gov/SLTC/scaffolding/index.html>
- 11 “Occupational Safety and Health Standards: Personal Protective Equipment, Respiratory Protection.” Occupational Safety and Health Administration, 2018. [https://www.osha.gov/pls/oshaweb/owadisp.show\\_document?p\\_table=STANDARDS&p\\_id=12716](https://www.osha.gov/pls/oshaweb/owadisp.show_document?p_table=STANDARDS&p_id=12716)
- 12 “Respiratory Protection.” Occupational Safety and Health Administration, 2018. <https://www.osha.gov/SLTC/respiratoryprotection/index.html>
- 13 “Occupational Safety and Health Standards: General Environmental Controls, Control of Hazardous Energy (Lockout/Tagout).” Occupational Safety and Health Administration, 2018. [https://www.osha.gov/pls/oshaweb/owadisp.show\\_document?p\\_table=STANDARDS&p\\_id=9804](https://www.osha.gov/pls/oshaweb/owadisp.show_document?p_table=STANDARDS&p_id=9804)
- 14 “Control of Hazardous Energy.” Occupational Safety and Health Administration, 2018. <https://www.osha.gov/SLTC/controlhazardousenergy/index.html>
- 15 “Safety and Health Regulations for Construction: Stairways and Ladders.” Occupational Safety and Health Administration, 2018. [https://www.osha.gov/pls/oshaweb/owadisp.show\\_document?p\\_table=STANDARDS&p\\_id=10839](https://www.osha.gov/pls/oshaweb/owadisp.show_document?p_table=STANDARDS&p_id=10839)
- 16 “Stairways and Ladders: A Guide to OSHA Rules.” Occupational Safety and Health Administration, 2018. <https://www.osha.gov/Publications/ladders/osh3124.html>
- 17 “Occupational Safety and Health Standards: Materials Handling and Storage, Powered Industrial Trucks.” [https://www.osha.gov/pls/oshaweb/owadisp.show\\_document?p\\_table=STANDARDS&p\\_id=9828](https://www.osha.gov/pls/oshaweb/owadisp.show_document?p_table=STANDARDS&p_id=9828)
- 18 “Powered Industrial Trucks – Forklifts.” Occupational Safety and Health Administration, 2018. <https://www.osha.gov/SLTC/powereditrucks/index.html>
- 19 “Occupational Safety and Health Standards: Machinery and Machine Guarding, General Requirements for All Machines.” Occupational Safety and Health Administration, 2018. [https://www.osha.gov/pls/oshaweb/owadisp.show\\_document?p\\_table=STANDARDS&p\\_id=9836](https://www.osha.gov/pls/oshaweb/owadisp.show_document?p_table=STANDARDS&p_id=9836)
- 20 “Machine Guarding.” Occupational Safety and Health Administration, 2018. <https://www.osha.gov/SLTC/machineguarding/index.html>
- 21 “Occupational Safety and Health Standards: Training Requirements.” Occupational Safety and Health Administration, 2018. [https://www.osha.gov/pls/oshaweb/owadisp.show\\_document?p\\_table=standards&p\\_id=10759](https://www.osha.gov/pls/oshaweb/owadisp.show_document?p_table=standards&p_id=10759)
- 22 “Occupational Safety and Health Standards: Electrical; Wiring Methods, Components and Equipment for General Use.” Occupational Safety and Health Administration, 2018. [https://www.osha.gov/pls/oshaweb/owadisp.show\\_document?p\\_table=STANDARDS&p\\_id=9882](https://www.osha.gov/pls/oshaweb/owadisp.show_document?p_table=STANDARDS&p_id=9882)
- 23 “Electrical.” Occupational Safety and Health Administration, 2018. <https://www.osha.gov/SLTC/electrical/index.html>

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